### Adichunchanagiri Institute of Technology, Chikkamagaluru <u>Department of Computer Science and Engineering</u>

### <u>Index</u>

SI. No.	Type of Program	Title	Year
1	Add-On Course	Basics of MAT Lab Tool  E-Waste Management	2017-18
2	Add-On Course	Software Testing  Basics of VLSI Design  Deep Learning: AI	2018-19
3	Add-On Course	Advances in Machine Learning  Advances in Android Application  Development	2020-21
4	Add-On Course	Digital Image Processing  LaTeX Editing Tool	2021-22

# ADD-ON Program

2017-18

### ADD ON PROGRAM ON

"Basics of MATLAB
Tool"





ADD-ON Course

On

"Basics of MATLAB Tool"





Organized by,

Department of Computer Science and Enginering.
Adichunchanagiri Institute of Technology,
Chikmagalur – 577102
Karnataka. India
www.aitchikmagalur.ac.in

### About the College:

Adichunchanagiri Institute of Technology (AIT) was established in the year 1980 under the auspicious of Adhichunchanagiri Shikshana Trust(R) with the blessings of Bhairavaikya Jagadguru Padmabhushana Sri Sri Sri Dr. Balagangadharanatha

Mahaswamiji to provide technical and other professional education in the rural area of Chikmagalur, the land of Coffee. With the blessings of Jagadguru Sri. Sri. Sri. Nirmalanandanatha Swamiji, AIT is

imparting the quality education in Engineering and Management with ethical and spiritual values. The engineering departments have recognized as research centers under VTU. The college has well equipped laboratory facilities and highly qualified and experienced faculty. The Institute is providing good training for students to excel in academics as well as in industry requirements and aims towards 100% placements to give a better future for students.

### About the Department:

The Department of Computer Science and Engineering is established in the year 1986. It was earlier affiliated to the Mysore University later to the Kuvempu University and at present, it is affiliated to Visvesvaraya Technological University, Belagavi. The alumni of the department are working in various reputed organizations in India and abroad. The department is accredited twice by National Broad of Accreditation, New Delhi.

The department offers UG, PG Courses with an intake of 120 and 18 respectively and facilitates R&D through VTU recognized research center. The department has received funds from various reputed agencies like AICTE, VGST, KSCST, ISRO, ISTE, etc., for its activities.

### **Objectives of the Course:**

To Impart the Knowledge to the students with MATLAB software.

[This enhances programming knowledge in Research and

Development].It provides a working introduction to the Matlab technical computing environment. [Themes of data analysis, visualization, and programming].It helps to introduce students the use of a high-level programming language, Matlab. [scientific problem solving with applications and examples from Engineering].

### Resource Person:

Mr. Varun E.

Assistant Professor

Dept of CS&E, AIT, Chikkamagaluru

### Convenor:

Dr. Pushpa Ravi kumar, Professor and Head, Dept. of CS&E.

### Coordinator:

Mr. Chethan P J, Asst Professor, Dept. CS&E, AIT, Chikkamagaluru



### || Jai Sri Gurudev ||



P.B No.91, Adichunchanagiri Extension, Chikkamagaluru-577 102, Karnataka ,India.

Ref: AIT/IQAC/CSE/

/2018-19

Date:26/11/2018

### Circular

Department of Computer Science & Engineering is conducting a Certificate Program (Add-on Program) on "Basics of MATLAB Tool" from 26/11/2018 to 30/11/2018. All other HOD's instruct the concern department students to attend the program. Following faculty member (Course instructor) is conducting a certificate program at CS&E Department.

Course Instructor

Mr. Chethan P J

Assistant Professor

Dept. of CS&E

AIT Chikmagalur

Hop's Signature and H.O.D.

Department of Computer Science as Institute of Technique

Michunchanagiri Institute of Tech... CHIKMAGALUR - 577102

Principal

B.E., M. Tech., Ph.D

Adichunchanagiri Institute of Technology CHIKKAMAGALURU-577102

### **Basics of MATLAB Tool**

### Add on Course for V Semester B.E. Computer Science and Engineering

**Duration: 30 Hours** 

### **Learning Objectives:**

1. To learn features of MATLAB as a programming tool.

- 2. To promote new teaching model that will help to develop programming skills and technique to solve mathematical problems.
- 3. To understand MATLAB graphic feature and its applications.

4. To use MATLAB as a simulation tool.

### Module 1. Introduction to MATLAB

- The MATLAB Environment
- MATLAB Basics Variables, Numbers, Operators, Expressions, Input and output.
- Vectors, Arrays Matrices

### Module 2. MATLAB Functions.

- Built-in Functions
- User defined Functions

### Module 3. Programming with MATLAB

- · Conditional Statements, Loops
- MATLAB Programs Programming and Debugging.
- Applications of MATLAB Programming.

### References:

- 1. "A Guide to MATLAB for Beginners and Experienced Users", 2<sup>nd</sup> Ed., Brian R. Hunt, Ronald L.Lipsman, Jonathan M. Rosenberg, Cambridge University Press, (2006).
- 2. "Essentials of MATLAB Programming", 2<sup>nd</sup> Ed., Stephen J. Chapman, Cengage Learning, (2009).

### ADICHUNCHANAGIRI INSTITUTE OF TECHNOLOGY CHIKKAMAGALURU-577102 DEPARTMENT OF COMPUTER SCIENCE & ENGINEERING

ADD-ON Course - Basics of MATLAB Tool

### **Enrollment List**

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SI. NO	USN	Student Name
1	4AI14CS012	APOORVASR Apoona
2	4AI14CS026	DEEKSHAKN Dey
3	4AI15CS002	ABHISHEK G Abhirh
4	4AI15CS028	CHANDANA PH Chandens
5	4AI15CS051	KOUSHIKSD Kowhite
6	4AI15CS064	NIDHIAR Nidhi
7	4AI15CS103	SIDDANTH BK Siddants
8	4AI16CS002	ADYA H N Adya
9	4AI16CS003	AGNES SANMATHI D
10	4AI16CS004	ALFIYA BANU 🕰
11	4AI16CS006	ANANYAKV Araupky
12	4AI16CS007	ANUSHAKN A nukha
13	4AI16CS008	ANUVIKA A S Aprusiva
14	4AI16CS009	ARVIND GIRISH arvind high
15	4AI16CS011	вавітна в Вальна
16	4AI16CS012	BHAGYASHREE H D Praghyahue
17	4AI16CS013	BHOOMIKA GS BLOOM
18	4AI16CS014	BHOOMIKA K BLOOM
19	4AI16CS015	BINDUSHREE C Brindishew
20	4AI16CS016	BINDUSREE BR Bind

	21	4Al16CS019	CHINMAYEE Chirus
	22	4AI16CS023	DEEPAKNR Deepak
	23	4Al16CS025	GADDI CHETAN Chether
	24	4AI16CS026	GOURAV BR Gowan
	25	4Al16CS027	HARSHAHK HaribaHN
	26	4AI16CS028	JAYASHREE Jagashers
	27	4AI16CS029	JEEVAN AS Jeevan
	28	4AI16CS030	KALPASHREEY JODOSHY
L	29	4AI16CS031	KARTHIKNL Karthill
L	30	4AI16CS032	KAVYAS Karigas.
	31	4AI16CS033	KAVYASK Kanyahi
	32	4AI16CS034	KAVYASHREE C M Kayaya
	33	4AI16CS035	KHALEEL AHAMED Knaleel
	34	4AI16CS036	KOWSHIK V
	35	4AI16CS037	KRUTHIKA G NAYAK KALIERI
	36	4AI16CS038	LEANDRA MARIA MENDONNASUL
	37	4AI16CS040	MANISHA P BEERAIAH Makuun
	38	4AI16CS042	MEGHANA DY Meghana
	39	4AI16CS047	NAVEEN P PARVATHANENI
	40	4AI16CS048	NAYANAKS Hauy
	41	4AI16CS049	NESARABR (Novally
	42	4AI16CS051	NISCHITHA KS ALKS
	43	3 4AI16CS052	NISHANTH KR Nigharthes
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50	4AI15CS063	NAVANEETH G D NAVA
51	4AI15CS102	SHUSHMA N GOWDA & LAD
52	4Al15CS112	SUMAN V H
53	4AI16CS039	MADHUMITHA KM May
54	4AI16CS065	RAKESH T 'R'
55	4AI16CS066	RAMANANDA S BHAT
56	4AI16CS067	RAMYA R D - 100116
57	4AI16CS068	RAMYASHREE CA P
58	4AI16CS070	ROJAKS (2)
59	4AI16CS072	SADVINE
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61	4AI16CS074	SAMRUDDHI DK Samuddhi
62	4AI16CS075	SAMRUDH PATEL D MI AODM
63	4AI16CS076	SAMRUDHI H R
64	4AI16CS079	SANJANA R S CAROLI
65	4AI16CS080	SANJANA R G Lavara
66	4AI16CS081	SAVEENA M M Savoena M. M
67	4AI16CS082	SHARATH KR SO COM
68	4AI16CS085	SHREYA BROCHROLASS
69	4AI16CS086	SHRIKARAN CN Prifaranen
70	4AI16CS087	SHRUTHA R JAIN
71	4AI16CS088	SIDDESH P
72	4AI16CS089	SINCHANASB Sinchanash
73	4AI16CS090	SINCHANA S GOWDA
74	4AI16CS091	SNEHAK SOL
75	4AI16CS092	SOUMYA H Joumya
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76	4AI16CS100	SRISTI BAGAMANE
77	4AI16CS101	SRUSTI R BS Social of
78	4AI16CS102	SUMANTHA M K
79	4Al16CS103	SUPRITH K
80	4AI16CS104	SUPRIYAS K Son Legal .
81	4AI16CS105	SURYACP Summer :
82	4AI16CS106	SUSHMAS Sustanas
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amy Course Instructor's Signature

Department of Computer Science and E Adichunchanagiri Institute of To CHIKMAGALUR - 577102

### ADICHUNCHANAGIRI INSTITUTE OF TECHNOLOGY CHIKKAMAGALURU-\$77102 DEPARTMENT OF COMPUTER SCIENCE & ENGINEERING

## ADD-ON Course - Basics of MATLAB Tool Attendance Report

Note :Session 1-9.30-12.30 Session 2-2.30-5.30

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Course Instructor's Signature

Department of Sempline Science and Enge Adichunchanagiri Institute CHIMA CHIMA



||Jai Sri Gurudev||

Sri Adichunchanagiri Shikshana Trust (R)

# ADICHUNCHANAGIRI INSTITUTEOF TECHNOLOGY

CHIKKAMAGALURU - 577 102





# Certificate of Participation

This is to certify that Meghana D.Y has successfully completed the add on course on "Basics of MATLAB Tool" from 26th to 30th November 2018, organized by Department of Computer Science and Engineering.

Prof. Chethan P J

Staff co-ordinator

Prof. S J Prashanth Staff co-ordinator

Dr. Pushpa Ravikumar H.O.D

### ADICHUNCHANAGIRI INSTITUE OF TECHNOLOGY, CHIKKAMAGALURU-577102. DEPARTMENT OF COPMUTER SCIENCE & ENGINEERING Add-On Course on "Basics of MATLAB Tool"

### OVER ALL Add-On Course PARTICIPANTS FEEDBACK

Sl.No	DESCRIPTION	EXCELLENT	GOOD	DOOD
1	How would you rate the presenter's knowledge on the concept?	DAGEBEENT	GOOD	POOR
2	How would you rate the concepts and Information provided by the Presenter?	· · · · · · · · · · · · · · · · · · ·		
3	What was your overall impression of the session?			
4	Remarks	Came to MAJLAB DO help	linow of sessions	about

Signature of the Participant

### ADICHUCHANAGIRI INSTITUTE OF TECHNOLOGY, CHIKKAMAGALURU DEPARTMENT OF COMPUTER SCIENCE & ENGINEERING ADD ON COURSE: BASICS OF MATLAB TOOL

### **Toppers List**

SLNo	Student Name	Student USN	Marks Obtained
1	SAMRUDHI H.R	4AI16CS076	44
2	DEEKSHA K.N	4AI14CS026	40
3	RAMYA R	4AI16CS067	32

Professor and H.O.D.

Department Signifum pulof Stichce and Engg.

Adichunchanagiri Institute of Technology

CHIKMAGALUR - 577102

### ADICHUNCHANAGIRI INSTITUTE OF TECHNOLOGY CHIKKAMAGALURU Department of Computer Science & Engineering

### **Summary Report**

The course "Basics of MATLAB Tool" was conducted at CS&E Dept from 26/11/2018 to 30/11/2018.

During the course ,the students are able to understand the importance of Millions of engineers and scientists worldwide use MATLAB for a range of applications, in industry and academia, including deep learning and machine learning, signal processing and communications, image and video processing, control systems, test and measurement, computational finance, and computational biology.

### **Course Outcomes**

- 1. Students learned features of MATLAB as a programming tool. They are fully familiar to all the features of MATLAB software and easily handle the software.
- 2. New teaching model which include theory & practical running simultaneously is introduced to our students. This method is very effective and helped to develop programming skills and technique to solve mathematical problems.
- 3. Students learned graphic features of MATLAB and they are able to use this feature effectively in the various applications.
- 4. Students are able to use MATLAB as a simulation tool.

5. Major outcome is students are able to work as a 'MATLAB programmer' in the industry because of the hands on practical sessions. This job oriented course will helps students to get the jobs in future.

Instructor's Signature

HOD's Signature Professor and H.O.D.

Chuncharagiri Institute of Technology





ADD-ON Course

On

"E-Waste Management"





Organized by,

Department of Computer Science and Enginering.

Adichunchanagiri Institute of Technology,
Chikmagalur – 577102

Karnataka. India

www.aitchikmagalur.ac.in

### About the College:

dichunchanagiri Institute of
echnology (AIT) was established in
the year 1980 under the auspicious
of Adhichunchanagiri Shikshana
Trust(R) with the blessings of
Bhairavaikya Jagadguru
Padmabhushana Sri Sri Sri Dr.
Balagangadharanatha

Mahaswamiji to provide technical and other professional education in the rural area of Chikmagalur, the land of Coffee. With the blessings of Jagadguru Sri. Sri. Sri. Nirmalanandanatha Swamiji, AIT is imparting the quality education in Engineering and Management with ethical and spiritual values. The engineering departments have

recognized as research centers under VTU. The college has well equipped laboratory facilities and highly qualified and experienced faculty. The Institute is providing good training for students to excel in academics as well as in industry requirements and aims towards 100% placements to give a better future for students.

### About the Department:

The Department of Computer Science and Engineering is established in the year 1986. It was earlier affiliated to the Mysore University later to the Kuvempu University and at present, it is affiliated to Visvesvaraya Technological University, Belagavi. The alumni of the department are working in various reputed organizations in India and abroad. The department is accredited twice by National Broad of Accreditation, New Delhi.

The department offers UG, PG Courses with an intake of 120 and 18 respectively and facilitates R&D through VTU recognized research center. The department has received funds from various reputed agencies like AICTE, VGST, KSCST, ISRO, ISTE, etc., for its activities.

### Objectives of the Course:

E-waste or electronic waste describes discarded or rejected electronic or electrical devices. Used electronics or electrical products which are destined for reuse, resale, refurbishment, salvage recycling through material recovery, or disposal are also considered e-waste. Informal e-waste processing in developing nations can lead to adverse human health effects and pollution in the environment. The recycling of e-waste serves a lot of useful purposes. It includes protecting human & environmental health by keeping those devices out of landfills. Or recovering the parts within the devices that still have value and providing manufacturers with recycled metal that can be used to make new products.

### Resource Person:

Mr. Varun E.

Assistant Professor

Dept of CS&E, AIT, Chikkamagaluru

### Convenor:

Dr Pushpa Ravi Kumar, Professor and Head, Dept of CS&E.

### Coordinator:

Mr. Gopinath C B, Asst Professor,

Dept. CS&E, AIT, Chikkamagaluru

### E-Waste Management



Add on Course for I Semester B.E. Computer Science and Engineering

**Duration: 30 Hours** 

Syllabus

### Module 1: INTRODUCTION

What is E-Waste, Indian and global scenario of e-Waste, Growth of Electrical and Electronics industry in India, E-waste generation in India, Composition of e-waste, Possible hazardous substances present in e-waste, Environmental and Health implications.

### Module 2: E-WASTE LEGISLATION

Regulatory regime for e-waste in India, The hazardous waste(Management and Handling) rules 2003, E-waste management rules 2015, Regulatory compliance including roles and responsibility of different stakeholders — producer, manufacturer, consumer etc., Proposed reduction in the use of hazardous substances(RoHS), Extended producer responsibility (EPR).

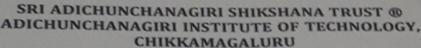
### Module 3: END OF LIFE MANAGEMENT OF E-WASTE

Historic methods of waste disposal - dumping, burning, landfill, Recycling and recovery technologies -

### Reference:

Johri R., "E-waste: implications, regulations, and management in India and current global best practices", TERI Press, New Delhi.

### || Jai Sri Gurudev ||



P.B No.91, Adichunchanagiri Extension, Chikkamagaluru-577 102, Karnataka, India.

Ref: AIT/IQAC/CSE/

/2018-19

Date: 16/03/2018

### Circular

Department of Computer Science & Engineering is conducting a Certificate Program (Add-on Program) on "E-Waste Management" from 16/03/2018 to 20/03/2018. All other HOD's instruct the concern department students to attend the program. Following faculty member (Course instructor) is conducting a certificate program at CS&E Department.

Course Instructor
Mr. Gopinath C B
Assistant Professor
Dept. of CS&E
AIT Chikkmagaluru.

HOD's Signature Professor and

epartment of Computer Science

Adichunchanagiri Institute of Technology

CHIKMAGALUR - 577102

CTTargardeg

Dr. CPTINIANADEVAURE

Principal

Adichunchanagiri Institute of

CHIKKAMAGALURU-577102

ADICHUNCHANAGIRI INSTITUTE OF TECHNOLOGY CHIKKAMAGALURU-577102 DEPARTMENT OF COMPUTER SCIENCE & ENGINEERING ADD-ON Course – E-Waste Management
Student Enrollment List

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Course Instructor's Signature



## ADICHUNCHANAGIRI INSTITUTE OF TECHNOLOGY CHIKKAMAGALURU-577102 DEPARTMENT OF COMPUTER SCIENCE & ENGINEERING ADD-ON Course - E-Waste Management

Attendance Report

Note: Session 1 -9.30-12.30

	Student Name	16/03/2018	18	17/03/2018	8	18/03/2018	80	19/03/2018	-	20/03/2018	80	Signature
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HOD's Signature

Department of Computer Science a Adichunchanagiri Institute of Teradichunchanagiri Institute of Teradichunchanagiri CHIKMAGALUR - ST7102

Course Instructor's Signature



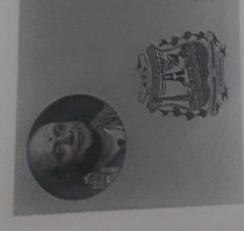
### ADICHUNCHANAGIRI INSTITUE OF TECHNOLOGY, CHIKKAMAGALURU-577102.

### DEPARTMENT OF COPMUTER SCIENCE & ENGINEERING

### Add-On Course on "E-Waste" OVER ALL Add-On Course PARTICIPANTS FEEDBACK

SI.No	DESCRIPTION	EXCELLENT	GOOD	POOR
1	How would you rate the presenter's knowledge on the concept?			
2	How would you rate the concepts and Information provided by the Presenter?	~		
3	What was your overall impression of the session?			
4	Remarks	the got the the	ungs the Lours get si	about the hope counding

Signature of the Participants



||Jai Sri Gurudev||

Sri Adichunchanagiri Shikshana Trust (R)

# ADICHUNCHANAGIRI INSTITUTEOF TECHNOLOGY

CHIKKAMAGALURU - 577 102

DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING

## Certificate of Participation

the add on course on "E- Waste Management" from 16th to 20th March This is to certify that HARSHA K.P. has successfully completed 2018, organized by Department of Computer Science and Engineering.

Prof. S J Prashanth Staff co-ordinator

Conff co-ordinator Prof. Chethan P.

### ADICHUCHANAGIRI INSTITUTE OF TECHNOLOGY, CHIKKAMAGALURU DEPARTMENT OF COMPUTER SCIENCE & ENGINEERING ADD ON COURSE: E-Waste Management

### Toppers List

SLNo	Student Name	Student USN	Marks Obtained
1	ANKITHA AP	4AI18CS007	49
2	NISCHITHA R	4AI18CS063	48
3	CHANDANA KS	4AI18CS022	47

Signature of HOD

Professor and H.C. Department of Computer Scien

Adichunchanagiri Institute o

### ADICHUCHANAGIRI INSTITUTE OF TECHNOLOGY, CHIKKAMAGALURU DEPARTMENT OF COMPUTER SCIENCE & ENGINEERING

ADD ON COURSE: E-Waste Management

Assesmont	Quartiana	

Semester: I

Student Name: ANKITHA A.P.

USN: 4AT 18 CS 007

Max Marks: 50

- 1. E-waste is also known as
- a) Electronic waste b) Essential waste
- c) European waste
- d) Household waste
- 2. Which one of the following is an example of e-waste?
- a) Nuclear wastes, medical wastes, toxic industrial wastes, etc
- b) Plastic bags, cardboard boxes, corroded metals, etc
- c) Beverage cans, packaged boxes, plastic bottles, etc
- er Sensors, alarms, sirens, TV etc.
- 3. Which one of the following is wrong about Cathode Ray Tubes (CRTs)?
- a) They were used in television sets.
- b) They do not pose any environmental threat as such.
- c) They have a high content of carcinogens and heavy metals.
- d) They release toxins into the soil, air and groundwater.
- 4. What is the most widely used method for e-waste disposal?
- a) Burning
- b) Recycling
- c) Disintegration

d) Land-filling.

- 5. Name some of the most hazardous leachates found in land-fills.
- a) Copper, and Bromine.

b) Mercury, Cadmium and Lead.

c) Lithium, Beryllium and Bromine.

- d) Boron, Fluorine and Hydrogen.
- 6. What are the adverse effects of mercury on health?
- a) Lung Cancer. b) Damages kidneys and brain. c) Softens bones. d) Asthmatic bronchitis
- 7. When did E-waste (management and handling) rules, 2011 come into effect?
- a) January 1, 2012
- b) March 1, 2012 © May 1, 2012.
- d) July 1, 2012

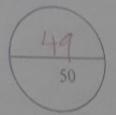
	8. Which cities produce the highest e-waste in India?
	a) Mumbai and Delhi. b) Chennai and Vishakhapatnam
	c) Kolkata and Patna d) Lucknow and Hyderabad
	9. The component beryllium mostly released from the E-waste of
1	a) Cathode Ray Tubes. b) Computer plate. c) Switch board. d) Microchips.
	10) Who is responsible for the disposal of the product when it becomes e-waste?
1	a) The seller b) The producers c) The customers d) The vendors
	11) WEEE stands for
	a) Waste Electrical and Electronic Equipment b) Water Electronic and Electronic Experiment
	c) Waste Electronic Electrical and Equipment d) Water Electronic and Electronic Equipment
	12) Which of the following reduce e-waste?
	a) Purchasing more and more gadgets b) Using them for a short time and then discarded
)	e) Good maintenance d) All of these
	13) WEEE is almost % of e-waste from solid waste.
	a) 5 b) 10 c) 15 d) 20
	14) In India, E-Waste management assumes greater significance because  a) Generation of own e-waste  b) Dumping of e-waste from developed countries  d) All of these
	15) Which of the following is one of the impacts of e-waste on the environment?  a) Global Warming  b) Deforestation  c) Soil erosion  d) Emission of gases
	16) The insulated wire has copper which causes  a) Skin disease or allergies or increase the risk of lung cancer  b) Can damage human's kidney, brain and human nervous system  c) Neurological disorders  d) Damage live and bones
	d) Damage nve and

	THE TETETS TO		
	Solid Waste Management	b) Integrated Solid Wa	aste Management
c) Integrated Soli	id Waste Machine	d) International Solid	
18) In 2006, the I waste by 2010.	AER projected that the electron	ic and electrical appliance	es would become e-
a) 1 billion	b) 2 billion	© 3 billion	d) 4 billion
19) What is the ha	nzardous pollutant released from	n calculators?	
a) Lithium	b) Barium	c) Lead	d) Copper
20) Which of the f	following can be considered as	source reduction?	
Material Substit	oution b) Treating	g offsite c) Analysis	d) Landfill disposal
21) Which of the f	ollowing metal affects mental	development in childre	en?
a) Lead	b) Barium	c) Zinc	d) Sliver
a) 20	b) Lung Disease c) d steel constitute of e-waste b) 30 e Comptroller and Auditor	c) 40	d) 50
waste generated ann a) 8LT	b) 5LT	c) 4LT	d) 7LT
	zardous pollutant occurs in	n plastic? c) Lead	d) Copper
26) Which of the fol a) Animal waste	lowing is not a biomedica b) Microbiological was	l waste? ste c) Chemical	waste d) Domestic waste
27) Waste removal s	ystem was established in b) Lahore	which of the follow c) Paris	ving cities for the first time? (d) London

	20) What is nazar	dous pollutant released from	Circuit Boards?	
	a) Arsenic	b) Barium	e) Lead	d) Copper
	29) Why is it diffi	cult to recycle plastics?		
	a) It is very hard	1	) It comes in differen	t sizes
	c) It is adhesive			t types of polymer resins
	30) Which of the 1	following is done on an ind	ividual level?	
	(a) Burning	b) Disposal	c) Recycling	6) Source reduction
	31) What is hazard	lous pollutant released from	m Calculators?	
1	a) Lithium	b) Mercury	c) Lead	d) Copper
	32) Which of the f	ollowing plans is used as	a waste managemen	t plan?
1	a) Plan for reuse	b) The integrated pla	n c) Plan for	recycling d) Plan for reducing
1	33) The organic m	aterial of the solid waste	will decompose	
	a) By the flow of v			By the soil particles
	By the action of microorganisms d) By oxidation			
3	4) Which of the fo	ollowing wastes is called	d the Municipal So	lid Waste (MSW)?
	Food wastes	b) Wood pieces	c) Plastic cans	d) All of the above
35	The process of	burning municipal soli	d wastes under sui	table temperature and conditions in
	ecific furnace is			
	Landfill	b) Incineration	c) Recycling	d) Vermicomposting
4)				
36	The huming of	solid waste is not reco	mmended becaus	e
			b) It requires	a lot of space
	It is very costly		d) It causes several environmental issues	
c) I	t requires moder	n technologies	a) it causes several crivitoriments	
			l landf	ill decomposes, it generates
37)	When the organ	nic matter present in t	ne samualy failur	ill decomposes, it generates
-	Methane —	b) Nitrogen	c) Hydroger	d) All of the above
a) 1\	retitatio	,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,		

	wastes?	of the following are the old	est and the most commo	n method used to du	mp solid
	a) River	b) Ocean	c) Landfill	d) None of the	above
	39) The di	sposable wastes contain			
	a) Solids	b) Slurries	c) Liquids	d) All of the a	above
		e correct statement			
	a) The was	te from one process become	es the input for anothe	r process	l of weste
		rocesses related to consum	ption and production	produces some kind	1 01 waste
		no real waste in nature			
	d) All of the	e above			
				wasta mrahlam?	
		of the following methods i			of the above
	a) Recycling	b) Landfilling	c) Both a and	a) None	of the above
				4	
		of the following statement	s is incorrect for plas	stic wastes:	aniad of time
	a) It is used	to make compost		asts for a longer [	period of time
	c) Toxic fun	nes are produced when bu	arnt d) No	on of these	
	43) Which of	f the following can be re	cycled many times?		
	a) Wood	b) Plastic			ganic materials
	a) wood	""			
		. Cu in accionw	adveed from landfil	1 wastes?	
	44) Which of	the following gas is pro			d) All of the abo
	a) Biogas	b) Natural gas	c) Liquified petrol	eum gas	a) All of the aut
	(5) Which of	the following statemen	ts is true about zer	o waste manage	ment?
				Sagregation of	garbage at the sou
-	a) Separate co	llection of each kind o			
(	c) Community	involvement	6)	All of the abov	e
			- there in integrate	ad waste manag	ement?
4	6) How man	y main components ar	e mere ni nitegrate	ou music manage	1) Flavor
	) Two	6) Thi	ree c	) Seven	d) Eleven

- 47) Polluters pay Principle means
- a) Anyone causing the pollution will pay for the damage caused
- b) Polluters paid well by NGOs
- c) Polluters may get a bonus
- d) Polluters are not the cause of pollution
- 48) Which of the following HW cannot be recycled?
- a) Used oil
- b) Treatment waste
- c) Paints
- d) Batteries
- 49) Which of the following solid wastes describes the term 'Municipal Solid Waste'?
- a) Toxic
- b) Hazardous
- c) Non-toxic
- d) Non-hazardous
- 50) Why is recycled paper banned for use in food containers?
- a) Because it creates a lot of spaces
- b) Because it creates contamination
- Because paper can be used only one time
- d) Because paper is very thick and can't cover the food containers



# ADICHUNCHANAGIRI INSTITUTE OF TECHNOLOGY CHIKKAMAGALURU Department of Computer Science & Engineering

# **Summary Report**

The course "E- Waste Management" was conducted for the first year students at CS&E Dept from 16/03/2018 to 20/03/2018.

During the course ,the students are able to understand the importance of The recycling of e-waste. For instance, include protecting human and environmental health by keeping those devices out of landfills. Or recovering the parts within the devices that still have value, and providing manufacturers with recycled metals that can be used to make new products.

# **Course Outcomes**

Upon successful completion of this course, students will be able to:

- Learn basic concepts of solid waste management, beginning from source generation to waste disposal in a system of municipality organizational structure.
- Develop understanding on various technological applications for processing of waste and their disposals in various ways.
- Acquire knowledge on waste to energy productions in the perspectives of sustainable development.
- Apply basic concepts in hazardous waste management and integrated waste management for urban areas.
- To acquire a fair amount of knowledge on waste characterization and its management practiced in various cities of India. To achieve this objective, students will be taught different case studies reported by previous researchers and technical bodies.

Instructor's Signature

Professor and M.O.D.

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CHIEMAGALUR - 577102

# ADD-ON Program 2018-19

# ADD on Program On "Basics of VLSI Design"



# || Jai Sri Gurudev ||

# SRI ADICHUNCHANAGIRI SHIKSHANA TRUST ® ADICHUNCHANAGIRI INSTITUTE OF TECHNOLOGY, CHIKKAMAGALURU

P.B No.91, Adichunchanagiri Extension, Chikkamagaluru-577 102, Karnataka ,India.

Ref: AIT/IQAC/CSE/

/2018-2019

Date: 01/01/2018

# Circular

Department of Computer Science & Engineering is conducting a Certificate Program (Add-on Program) on "Basics of VLSI Design [19CS\_AC\_012]" from 15-01-2018 to 28-01-2018. All other HOD's instruct the concern department students to attend the program. Following faculty member (Course instructor) is conducting a certificate program at CS&E Department.

# Course Instructor

5

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1. Prof. S J Prashantha

Assistant Professor

Dept. of CS&E

AIT Chikmagalur

2. Prof. Vivekananda

Assistant Professor

Dept. of CS&E

AIT Chikmagalur

Departin Des Signature Science and Engg.
Adichunchanagiri Institute of Technology CHIKMAGALUR - 577102

Dr. C.T. JAYADEVA

Principal

B.E., M. Tech., Ph.D

Adichunchanagiri Institute of Technology CHIKKAMAGALURU-577102





ADD-ON Course

On

"Basics of VLSI Design"





Organized by,

Department of Computer Science and Enginering. Adichunchanagiri Institute of Technology, Chikmagalur – 577102 Karnataka. India www.aitchikmagalur.ac.in

### About the College:

Adichunchanagiri Institute of Technology (AIT) was established in the year 1980 under the auspicious of Adhichunchanagiri Shikshana Trust(R) with the blessings of Bhairavaikya Jagadguru Padmabhushana Sri Sri Sri Dr. Balagangadharanatha

Mahaswamiji to provide technical and other professional education in the rural area of Chikmagalur, the land of Coffee. With the blessings of Jagadguru Sri. Sri. Nirmalanandanatha Swamiji, AIT is imparting the quality education in Engineering and Management with ethical and spiritual values. The engineering departments have recognized as research centers under VTU. The college has well equipped laboratory facilities and highly qualified and experienced faculty. The Institute is providing good training for students to excel in academics as well as in industry requirements and aims towards 100% placements to give a better future for students.

### **About the Department:**

The Department of Computer Science and Engineering is established in the year 1986. It was earlier affiliated to the Mysore University later to the Kuvempu University and at present, it Visvesvaraya affiliated to Technological University, Belagavi. The alumni of the department are working in various reputed organizations in India and abroad. The department is accredited twice by National Broad of Accreditation, New Delhi

The department offers UG, PG Courses with an intake of 120 and 18 respectively and facilitates R&D through VTU recognized research center. The department has received funds from various reputed agencies like AICTE, VGST, KSCST, ISRO, ISTE, etc., for its activities.

### **Objectives of the Course:**

Today's world is digital. Unbelievable growth in electronics has made it possible. The back bone for electronic gadgets is a small silicon material which is often referred as chip. In order to design any chip (IC), the designer has to follow many complex procedures for which one has to have all the basic of circuit design using transistors.

The advent of Electronic Design Automation Tools made it possible to cut down the design cycle time to a great extent. In this course Verilog HDL is presented which is a popular language for designing any digital circuit using EDA Tools. Various circuits in transistor level are presented which are very much essential for IC design.

# Resource Person:

Mr. Darshan L M.

Assistant Professor

Dept of CS&E, AIT, Chikkamagaluru

### Convenor:

Dr Pushpa Ravi kumar, Professor and Head, Dept. of CS&E.

### Coordinator:

Mr. S J Prashanth, Asst Professor,

Dept. CS&E, AIT, Chikkamagaluru

# Add on course - 30 Hours

ADD on Course Name: Basics of VLSI Design

Course Code: 19CS\_AC\_012

Module 1:

Introduction: Basic steps of IC fabrication, PMOS, NMOS, CMOS &BiCMOS, and SOI process technologies, MOS transistors - MOS transistor switches – Basic gate using switches, working polartransistor Resistors and Capacitors. Basic Electrical Properties of MOS and BiCMOS Circuits: Working of MOS transistors – threshold voltage; MOS design equations: Ids–Vds relationships, Threshold Voltage, Body effect, Channel length modulation , gm, gds, figure of merit  $\omega$ 0; Pass transistor, NMOS Inverter, CMOS Inverter analysis and design, Various pull ups loads, Bi-CMOS Inverters.

Module 2:

Basic Circuit Concepts: Capacitance, resistance estimations- Sheet Resistance Rs, MOS Divice Capacitances, routing a pacitance, Analytic Inverter Delays, Driving large Capacitive Loads, Fan-in and fan-out. VLSI Circuit Design Processes: VLSI Design Flow, MOS Layers, Stick Diagrams, Design Rules and Layout, 2µm CMOS Design rules for wires, Contacts and Transistors Layout Diagrams for NMOS and CMOS Inverters and Gates, Scaling of MOS circuits, Limitations of Scaling.

Module 3:

Gate level Design: Logic gates and other complex gates, Switch logic, Alternate gate circuits. Subsystem Design: Shifters, Adders, ALUs, Multipliers, Parity generators, Comparators, Counters, VHDL Synthesis: VHDL Synthesis, Circuit Design Flow, Circuit Synthesis, Simulation

### **TEXT BOOKS:**

- 1. Kamran Eshraghian, Eshraghian Douglas and A. Pucknell, "Essentials of VLSI circuits and systems", PHI, 2013 Edition.
- 2. K.Lal Kishore and V.S.V. Prabhakar, "VLSI Design", IK Publishers

REFERENCES: 1. Weste and Eshraghian, "Principles of CMOS VLSI Design", Pearson Education, 1999.



10 Hours

# STUDENT ENROLLMENT LIST

ADD on Course Name: Basics of VLSI Design

Branch: CSE

SI NO	NAME	USN	
1	APOORVA S R	4AI14CS012	APOORYA S
2	DEEKSHA K N	4AI14CS026	Deeksha M
3	ABHISHEK G	4AI15CS002	Alorida
4	CHANDANA PH	4AI15CS028	Chara
5	KOUSHIK S D	4AI15CS051	Roughill
6	NIDHI A R	4AI15CS064	parks R
7	SIDDANTH BK	4AI15CS103	SULH
8	ADYA H N	4AI16CS002	AdupthAN
9	AGNES SANMATHI D	4AI16CS003	Ames Samuel
10	ALFIYA BANU	4AI16CS004	
11	ANANYA K V	4AI16CS006	Aranja KV
12	ANUSHA K N	4AI16CS007	Anishakir
13	ANUVIKA A S	4AI16CS008	# P
14	ARVIND GIRISH	4AI16CS009	Ame
15	BABITHA B	4AI16CS011	Del Than B
16	BHAGYASHREE H D	4AI16CS012	- natura B
17	BHOOMIKA G S	4AI16CS013	This in 6.
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19	BINDUSHREE C	4AI16CS015	Thornes P
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21	BRUNDA D	4AI16CS017	mus
22	CHANDANA H Y	4AI16CS017	20 1000
23	CHINMAYEE	4AI16CS018 4AI16CS019	Chantar
24	CHINTHANA M C	4AI16CS019	CD
25	CHIRAG M R	4AI16CS021 4AI16CS022	
26	DEEPAK N R		- Chiral
27	DEEPIKA D P	4AI16CS023	Deerska PP
28	GADDI CHETAN	4AI16CS024 4AI16CS025	- Oralle Lan
29	GOURAV B R	4AI16CS025	Crouleu BR
30	HARSHA H K	4AI16CS026 4AI16CS027	Magha,
31	JAYASHREE	4AI16CS027 4AI16CS028	- Jayashree
32	JEEVAN A S		- Beevan A.S
33	KALPASHREE Y	4AI16CS029	Repastrue. 7
34	KARTHIK N L	4AI16CS030	(hest)
35		4AI16CS031	- Manyay
•	KAVYA S	4AI16CS032	- K ACH
36	KAVYA S K	4A!16CS033	anda
37	KAVYASHREE C M	4AI16CS034	hayder
38	KHALEEL AHAMED	4AI16CS035	theled-Ahaned
39	KOWSHIK V	4AI16CS036	Kowshik
10	KRUTHIKA G NAYAK	4AI16CS037	- Knutika Or Nay
<del>1</del> 1	LEANDRA MARIA MENDON	4AI16CS038	Levera Maria
12	MANISHA P BEERAIAH	4AI16CS040	navo
43	MEGHANA D Y	4AI16CS042	Melliana D. Y
14	MOHAMMED NIHAL KHAN	4AI16CS043	Mahamul
15	MOUNA J	4AI16CS044	Mary (
46	NAMITHA M TAPSE	4AI16CS046	il of (MIC)

	NAVEEN P PARVATHANENI	4AI16CS047	nauben
8	NAYANA K S	4AI16CS048	Nazara
9	NESARA B R	4AI16CS049	NisaraBR
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51	NISHANTH K R	4AI16CS052	Misharth 1
52	NISWARTH V SHETTY	4AI16CS053	Nicharton
53	P PRADEEP KUMAR	4AI16CS054	tradeylin
54	POOJA B R	4AI16CS055	Pagia BR
55	POOJA B S	4AI16CS056	Proja B.
56	POOJA N K	4AI16CS057	Pooja NK
57	POOJA S	4AI16CS058	AoB
58	POORNIMA C L	4AI16CS059	Doogus
59	RACHANA N VANAGUR	4AI16CS062	Pal
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61	RAHUL A	4AI16CS064	115.1
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66	VIJETHA B S	4AI17CS409	Shoraya B.R
67	SHREYA B R	4AI16CS085	Shrikalan CN
68	SHRIKARAN C N	4AI16CS086	Shouther
69	SHRUTHA R JAIN	4AI16CS087	200-10
70	SIDDESH P	4AI16CS088	S? lksh P
71	SINCHANA S B	4AI16CS089	Mychang SI
72	SINCHANA S GOWDA	4AI16CS090	Chela K
73	SNEHA K	4AI16CS091	Cheta
75	SOUMYA H	4AI16CS092	Samon
76	SOUNDARYA GOGATE T S	4AI16CS093	SOWMYA HP
77	SOURAB SAKLECHA SOWMYA M	4AI16CS094 4AI16CS095	spandara 18
78	SPANDANA H P	4AI16CS095	
79 .		4AI16CS097	Sparitor R
80	SPARSHA B R	4AI16CS098	Spariton
81	SPOORTHI A N	4AI16CS099	spoorting and
82	SRISTI BAGAMANE	4AI16CS100	spoorthi AN
83	SRUSTI R B S	4AI16CS101	
84	SUMANTHA M K	4AI16CS102	Senthamk Sup: The
85	SUPRITH K	4AI16CS103	Sup : the
86	SUPRIYA S K	4AI16CS104	Former
87	VAISHNAVI C O	4AI16CS114	raishnavi Co
88	VAISHNAVI RAO	4AI16CS115	ra

Course Instructor Signature

Department of Computer Science and Er Adichunchanagiri Institute of Technology CHIKMAGALUR - 577102

ADD on Course Name: Basics of VLSI Design

Course Code: 19CS\_AC\_012

**Branch: CSE** 

Students are identified for ADD on Course Classes based on their enrolment.

ADD on Course classes will be held during 15-01-2018 to 28-01-2018 at CS&E dept from 4-6pm

# **Attendance Report**

SI NO	NAME	USN	During 15-01-2018 to 28-01-2018. Signature
			1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 APOOJYA SR
1	APOORVA S R	4AI14CS012	PPPPPPPPPPPPPPPPPPPPPPPPPPPPPPPPPPPPPP
2	DEEKSHA K N	4AI14CS026	PPAPPPPPPPPPPPPPPPPPPPPPPPPPPPPPPPPPPP
3	ABHISHEK G	4AI15CS002	PPAPPPAPPPAPPPChase
4	CHANDANA PH	4AI15CS028	PPPPPPPPPPPPPPPPPPPPPPPPPPPPPPPPPPPPPP
5	KOUSHIK S D	4AI15CS051	PPPPPPPPPPPPPPPPPPPPPPPPPPPPPPPPPPPPPP
6	NIDHI A R	4AI15CS064	PPPPPPPPPPPPPPPPPPINAME
7	SIDDANTH BK	4AI15CS103	APPEPPPPPPPPPPPSHdush
8	ADYA H N	4AI16CS002	PPPPPPPPPPPPPPAdyauny
9	AGNES SANMATHI D	4AI16CS003	PPPPPPPPPPPPPPPA
10	ALFIYA BANU	4AI16CS004	PPPPPPPPPPPPPPD
11	ANANYA K V	4AI16CS006	PPPAPPPPPPPPPPPAPP
12	ANUSHA K N	4AI16CS007	PPPPPPPPPPPPPPPPPPPPPPPPPPPPPPPPPPPPPP
13	ANUVIKA A S	4AI16CS008	PODDEPPEDDDDDDDDDDDDDDDD
14	ARVIND GIRISH	4AI16CS009	P D P P P P P P P P P P P P P P P P P P
15	ВАВІТНА В	4AI16CS011	PPPPPPPPPPPPPPPPPPPPPPPPPPPPPPPPPPPPPP
16	BHAGYASHREE H D	4AI16CS012	PPPPPPPPPPPPPPPPPPP
17	BHOOMIKA G S	4AI16CS013	PPPPPPPPPPPPPPPPP
18	BHOOMIKA K	4AI16CS014	PPPAPPPPPPPPPPPPPPPPPPPPPPPPPPPPPPPPPP
19	BINDUSHREE C	4AI16CS015	PPPPPPPPPPPPPPPPPPPPPPPPPPPPPPPPPPPPPPP
20	BINDUSREE B R	4AI16CS016	PPPOPPAPPP PPPPBixtu
21	BRUNDA D	4AI16CS017	PPPPPPPPPPPPPPPPPPPPPPPPPPPPPPPPPPPPPP
22	CHANDANA H Y	4AI16CS018	PPPPPPPPPPPPPPPPPPPPPPPPPPPPPPPPPPPPPP
23	CHINMAYEE	4AI16CS019	PPPPPPPPPPPPPPPPPP
24	CHINTHANA M C	4AI16CS021	PPPPPPPPPPPPPPPPPPPPPPPPPPPPPPPPPPPPPP
25	CHIRAG M R	4AI16CS022	PPPPPPPPPPPPPPPPPPPPPPPPPPPPPPPPPPPPPP
26	DEEPAK N R	4AI16CS023	PAPPPPPPPPPPPPDOLES
27	DEEPIKA D P	4AI16CS024	PPPPPPPPPPPPPPPPPPP
28	GADDI CHETAN	4AI16CS025	PPPPPPPPPPPPPPGast
29	GOURAV B R	4AI16CS026	PPPPPPPPPPPPPPP
30	HARSHA H K	4AI16CS027	PPPPPPPPPPPP
31	JAYASHREE	4AI16CS028	PPPPPPPPPPPPPPTCUOL
32	JEEVAN A S	4AI16CS029	PPPPPPPPPPPPPTEVEN
33	KALPASHREE Y	4AI16CS030	PPAPPPPPPPPPPPPPPPP
34	KARTHIK N L	4AI16CS031	PPPPPPPPPPPPPPP
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36	KAVYA S K	4AI16CS033	PPPPPPPPPPPPPPP
37	KAVYASHREE C M	4AI16CS034	PPPPPPPPPPPPPPPKanja
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39	KOWSHIK V	4AI16CS036	P	P	10		16			T ==									
40	KRUTHIKA G NAYAK	4AI16CS037	0	P	P	7	P	5	<u>P</u>	6	P	A	6	P	P	P	F	Kal	٦
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42	MANISHA P BEERAIAH	4AI16CS040	-	P	A	P	P	P	A	P	P	P	p	P	P	p	P	Leans	.]
43	MEGHANA DY	4AI16CS040	P	P	p	p	P	P	P	P	P	D	P	P	P	P	P	,	7
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48	NAYANA K S	4AI16CS048	-	1	P	P	P	P	P	P	P	P	0	P	8	P	18	Naveen	-
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61	RAHUL S	4AI16CS063	P	P	P	P	P	P	P	a	P	P	P	P	P	P	0	k.H.	1
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63	ALFIYA SHAIK	4AI16CS127	P	P	P	12	9	P	P	P	P	P	P	P	P	P	0	POOJA -	1
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65	SHASHIKALA S	4AI17CS400	<del>                                      </del>	P	P	P	A	P	P	PI	P	P	P	þ	0	P	0	Startikala	l
66	VUETHA B S	4AI17CS407	_	8	P	P		6	8	P	P	P	P	0	0	D	P	Sharkala	
67	SHREYA B R	4AI17CS409	•	P	P	P	6	P	8	P	P	P	P	0	0	0	4	Slow	
68	SHRIKARAN C N	4AI16CS085	P	P	P	9	P	A	P	8	P	P	P	P	P	P	P	Dave	
69	SHRUTHA R JAIN	4AI16CS086	'-	•	P	9	P	P	P	PI	P	P	0	P	P	P	è	CATAL	
70	SIDDESH P	4AI16CS087	P	P	P	P	P	P	2	P!	P	P	A	P	P	e	o	Shrutha	
71	SINCHANA S B	4AI16CS088	P	P	P	P	8	PI	P	B.	P	P	D	P	p	P	P	SMILL	Ĭ
72	SINCHANA S GOWDA	4AI16CS089 4AI16CS090	P	$\frac{P}{\Omega}$	P	17	-	4	>	P	P	P	0	P	O	P	p	Sing	
73	SNEHA K	4AI16CS090 4AI16CS091		Ď	P	2	_	P		PI		P	P	P	p	P	0	Sinchan	
74	SOUMYA H	4AI16CS091 4AI16CS092	P	P	P	-	•	P	P	P.	P	P	e	P	P	P	P	Sull	
75	SOUNDARYA GOGATE T S	4AI16CS092 4AI16CS093	P		-	<b>X</b>		$\overline{}$		-	9	P	P	6	P	0	P	Sound	
76	SOURAB SAKLECHA	4AI16CS093	ρ	-	$P \downarrow$	P		PF		2 8	2 1	P	A	P	P	P	P	Jan	~
77	SOWMYA M	4AI16CS095	-	•	-	2	18	_ '		1		>	9	P	8	9	P	Sava	
78	SPANDANA H P	4AI16CS096	$\frac{\rho}{\rho}$	2	0	R	1	1	_		•	9	P	P	P	P	P	Sur	
79	SPANDANA S	4AI16CS097	P	P	1	P	-	-	2	PE	PL	P	P	9	P	9	P	Spande	4
80	SPARSHA B R	4AI16CS098	P	P	~	B 1	_	_	$\sim$	P	F	)	P	P	A	P	0	Spandona	
81	SPOORTHI A N	4AI16CS099	^	P	*	•	Pf	++-	-	P	-	)	P	8	P	P	P	LO30	
82	SRISTI BAGAMANE	4AI16CS100	-	0	D	_	2				P	A	P	P	P	P	P	Spen	=
83	SRUSTI R B S	4AI16CS101	-	0	5			P	16	-	-	8	P	9	9	P	P	SPISTI	,
84	SUMANTHA M K	4AI16CS102	-	•	-	F	1	,		R 1	8 1	P	P	P	9	P	n	saib.	
85	SUPRITH K		0	4		-	1	5 6	-	P	2	P	P	P	P	9	0	-8003	
86	SUPRIYA S K		p	V	P	P	2	1	-	-	-	9	2	P	P	P	P	Sumanth	
87	VAISHNAVI C O		p	<del>*</del>	1	S	4	216		FE	Ш	P	P	Ø	P	P	P	Ludy	•
88	VAISHNAVI RAO	4AI16CS115	n	0 6	1	-	P	PIP	_	2	P	P	P	A	P	P	P	()	
			•	Y.L			1			PI	PI	P	PT	0	0	~	÷	V	

Course Instructor Signature

HOD Signature
Professor and H.V.D.

Department of Computer Science and Engg.

Adichunchanagiri Institute of Technology

CHIKMAGALUR - 577102

# Add-On Course on "Basics of VLSI Design"

# **OVER ALL Add-On Course PARTICIPANTS FEEDBACK**

Sl.No	DESCRIPTION	EXCELLENT	GOOD	POOR
1	How would you rate the presenter's knowledge on the concept?	~		-
2	How would you rate the concepts and Information provided by the Presenter?			
3	What was your overall impression of the session?			
4	Remarks	_		

Signature of the Participants



# ||Jai Sri Gurudev||

# ADICHUNCHANAGIRI INSTITUTEOF TECHNOLOGY Sri Adichunchanagiri Shikshana Trust (R)



DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING

CHIKKAMAGALURU - 577 102

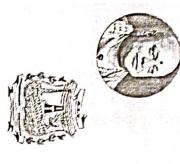
# Certificate of Participation

organized by Department of Computer Science and Engineering. on course on "Basics of VLSI Design" from 15-01-2018 to 28-01-2018 This is to certify that CHANDANA H Y has successfully completed the add

Prof. S J Prashantha Staff co-ordinator

Prof. Vivekananda Staff co-ordinator

Dr. Rushpa Ravidumarence and Adichunchl O.D. Institute of Technology CHIMMAGALUS - 57 1702



# ||Jai Sri Gurudev||

Sri Adichunchanagiri Shikshana Trust (R)

# DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING ADICHUNCHANAGIRI INSTITUTEOF TECHNOLOGY CHIKKAMAGALURU - 577 102



# Certificate of Participation

by Department of Computer Science and Engineering. course on "Basics of VLSI Design" from 15-01-2018 to 28-01-2018 organized This is to certify that SPANDANA S has successfully completed the add on

Prof. S J Prashantha Staff co-ordinator

Prof. Vivekananda Staff co-ordinator

Dr. Pusiessor and H.O.D. Department of Technology Adichunch H.Q.D. Dinstitute of Technology CHIKMAGALUR - 577102

ADD ON COURSE: Basics of VLSI Design

Student Name: SOURAB SAKLECHA

USN: 4A11 6 CS094

I	nei	tru	ctio	n for	etuc	lents:
	115	1111	CHO	n w	SHILL	iciiis.

- 1. Mark your answers in Black or blue ink point pen on the multiple-choice form provided.
- 2. Tick mark only one option you consider correct for each questions.
- 3. Each question carries 1 mark

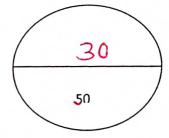
	Answer for 50 multiple choice questio	ns
	The work function difference is negative     a) silicon substrate     silicon substrate & polysilicon gate	for b) polysilicon gate d) none of the mentioned
1	2. Substrate bias voltage is positive for nMC a) true b) false	OS.
1	3. According to body effect, substrate is bia a) source b)drain c)gate d) Vss	
1	4. Increasing Vsb the threshold vo a) does not effect b) decreases c) increases d) exponentially increa	
1	5. Transconductance gives the relationship land input current and output voltage by output c) input current and input voltage d) output	out current and input voltage
21	6. Transconductance can be increased by a) decreasing the width c) increasing the length d) decreasing the	
,o'	7. Increasing the transconductance  a) increases input capacitance b) decrease c) decreasing input capacitance d) decrease	
,0	8. Ids is to length L of the channel a) directly proportional b) inversely p c) not relatedd) logarithmic	roportional
/0 '		ds on rier mobility of the mentioned

( )	10) A fast circuit requires  a) high gm b) low gm c) does not depend on gm d) low cost
1	a) effective drain voltage b) effective gate voltage c) channel length d) effective source voltage
-1"	12) What is a MOS transistor?  (a) minority carrier device (b) majority carrier device (c) majority & minority carrier device (d) none of the mentioned
0	13) The MOS transistor is non conducting when?  a) zero source bias  b) zero threshold voltage  c) zero gate bias  d) zero drain bias
1	14) Gate logic is also called as a) transistor logic b) switch logic c) complementary logic d) restoring logic
	15) Both NAND and NOR gates can be used in gate logic.
0	a) true b) false
1	16) The CMOS inverter has power dissipation. a) low b) more c) no d) very less
	17) As the number of inputs increases, the NAND gate delay
D.	a) increases b) decreases c) does not vary d) exponentially decreases
1	18) NAND gate delay can be given as a) Tint b) Tint/n o n*Tint d) 2n*Tint
1	19) In CMOS NAND gate, p transistors are connected in a) series b) parallel c) cascade d) random
1	20) BiCMOS is used for fan-out. a) less b) more c) no d) very less
1	21) Which can handle high capacitance load? a) NAND b) nMOS NAND c) CMOS NAND dr BiCMOS NAND
1	22) Which among the following is a process of transforming design entry information of the circuit into a set of logic equations?  a) Simulation  b) Optimization  c) Synthesis  d. Verification
1	23) is the fundamental architecture block or element of a target PLD.  a) System Partitioning b) Pre-layout Simulation c) Logic cell d) Post-layout Simulation

	0	ż	24) In VLSI design, which printerconnections?	rocess deals with the determination of resistance & capacitance of
/	U	-	a) Floor planning c) Testing	b) Placement & routing d) Extraction
0	0	1	25) In Net-list language, the a) Before b) At the time c)After d) None of the	
	0		26) In VHDL, which object/s a) Constant c) Signal	s is/are used to connect entities together for the model formation? b) Variable d) All of the above
	_\		27) Which data type in VHD dynamic nature? a) Scalar b) Acc	OL is non synthesizable & allows the designer to model the objects of cess c) Composite d) File
	0	1		n mode is used to check the timing performance of a design? itch-level c) Transistor-level d) Gate-level
	1	-	that it can be used by the sin	s, which step specifies the conversion of VHDL intermediate code so nulator? aboration c) Initialization d) Execution
	_ \	1	target signals periodically in a) Event-driven Simulator	b) Cycle-based Simulator
			c) Both a and b	d) None of the above
				ving is not a characteristic of 'Event-driven Simulator'?
1	0	ť	a) Identification of timing vi c) Time delay calculation	olations b) Storage of state values & time information d) No event scheduling
-	1	-	a) Attributes & Library	wing is an output generated by synthesis process?  b) RTL VHDL description  d) Gate-level net list
1	0	)	<ul><li>33) Register transfer level do between them.</li><li>a) Sequential b) Combination</li></ul>	escription specifies all of the registers in a design &logic onal c) Both a and b d) None of the above
	- 1	-	current it can source?	esis process specifies the resistance by controlling the quantity of attribute c) Arrival time attribute d) All of the above

	35) Which type of digital sys	stems exhibit the neo	cessity for the exist	ence of at least one feedback
0	path from output to input?  a) Combinational System  c) Both a and b	b) Sequent d) None of	•	
, (	36) The time required for an 'Setup Time'.	input data to settle	the triggering	gedge of clock is known as
D	a) Before b) During	c) After d	) All of the above	
	37) Hold time is defined as the clock.	he time required for	the data to	_ after the triggering edge of
0	a) Increase b) Decrease	c) Remain stable	d) All of the abo	ove
0	38) An Antifuse programmir a) SPLDs b) FPGAs	ng technology is pred c) CPLDs	dominantly associate d) All of the ab	ed with ove
	39) In fusible link technolog voltage & current to do	ies, the undesired fu	ses are removed by	the pulse application of
1	a) Low b) Moderate	c) fligh	d) All of the ab	pove
0	40) Which programming tech a) EPROM b) EEPROM	nnologies is/are pred c) FLASH	ominantly associate d) All of the abo	d with SPLDs and CPLDs?
(	41) Before the commenceme a) Number of clock signals i b) Number of transistors use c) Power dissipated by chip d) All of the above	necessary for routing ed per storage require	throughout the chir	mine/s
\'_	42) Which method/s of physiclements are grouped together a) H tree c) Both a and b	cal clocking is/are a er to make the use of b) balanced tree clo d) None of the abov	nearby or same dist ck network	ure where the memory ribution points?
,0'	43) Increase in the physical day Increases b) Stabilizes	istance of H-tree c) Decreases d) A	the skew rat	te.
1	44) Which type of MOSFET a) Depletion MOSFET c) Both a and b	exhibits no current a by Enhancement Mo d) None of the abov	DSFET	
1	45) In enhancement MOSFET in the magnitude of gate poter a) Increases b) Remains con	Γ, the magnitude of α ntials. nstant c) Decreases		
	46) After an initialization pl			hase.
1	a) Compilation b) Elaboration			

47) In DIBL, which among the following is/are regarded as the source/s of leakage? a) Subthreshold conduction b) Gate leakage c) Junction leakage d) All of the above 48) Which among the following can be regarded as an/the application/s of MOS switch in an IC design? a) Multiplexing & Modulation b) Transmission gate in digital circuits c) Simulation of a resistor d) All of the above 49) Which among the following is/are regarded as an/the active resistor/s? d. All of the above a MOS diode b. MOS transistor c. MOS switch 50) In testability, which terminology is used to represent or indicate the formal evidences of correctness? d. Integration Verification c. Simulation a. Validation



# ADICHUCHANAGIRI INSTITUTE OF TECHNOLOGY, CHIKKAMAGALURU DEPARTMENT OF COMPUTER SCIENCE & ENGINEERING ADD ON COURSE: "Basics of VLSI design"

# **Toppers List**

Sl.No	Student Name	Student USN	Marks Obtained
1	SOURAB SAKLECHA	4AI16CS094	30
2	KALPASHREE Y	4AI16CS030	28
3	KAVYASHREE C M	4AI16CS034	25

Department and H.O.D.

Department HOD ience and Engg
Adichunchanagiri Institute of Technology
CHIKMAGALUR - 577102

# ADICHUNCHANAGIRI INSTITUTE OF TECHNOLOGY CHIKKAMAGALURU Department of Computer Science & Engineering

# **Summary Report**

The course "Basics of VLSI Design"was conducted at CS&E Dept from 15/01/2018 to 28/01/2018.

This course helps the students to understand how VLSI affords IC designers the ability to design utilizing less space. Typically, electronic circuits incorporate a CPU, RAM, ROM, and other peripherals on a single PCBA. However, very large-scale integration (VLSI) technology affords an IC designer the ability to add all of these into one chip

# **Course Outcomes**

- To learn basic CMOS Circuits.
- To learn CMOS process technology
- To learn techniques of chip design using programmable devices.
- To learn the concepts of designing VLSI Subsystems.

Instructor's Signature

HOD's Signature

Professor and H.O.D.

riment of Computer Science and Engg.

h wagiri Institute of Technology

CALUR - 577102

# ADD on Program On "Deep Learning :AI"





ADD-ON Course On

"DEEP LEARNING:AI"





Organized by,

Department of Computer Science and Enginering. Adichunchanagiri Institute of Technology, Chikmagalur – 577102 Karnataka. India www.aitchikmagalur.ac.in

About the College:

Adichunchanagiri Institute of Technology (AIT) was established in the year 1980 under the auspicious of Adichunchanagiri Shikshana Trust(R) with the blessings of Bhairavaikya Jagadguru Padmabhushana Sri Sri Sri Dr. Balagangadharanatha

Mahaswamiji to provide technical and other professional education in the rural area of Chikmagalur, the land of Coffee. With the blessings of Jagadguru Sri. Sri. Sri Nirmalanandanatha Swamiji, AIT is imparting the quality education in Engineering and Management with ethical and spiritual values. The engineering departments have

recognized as research centers under VTU. The college has well equipped laboratory facilities and highly qualified and experienced faculty. The Institute is providing good training for students to excel in academics as well as in industry requirements and aims towards 100% placements to give a better future for students.

### About the Department:

The Department of Computer Science and Engineering is established in the year 1986. It was earlier affiliated to the Mysore University later to the Kuvempu University and at present, it is affiliated to Visvesvaraya Technological University, Belagavi. The alumni of the department are working in various reputed organizations in India and abroad. The department is accredited twice by National Broad of Accreditation, New Delhi.

The department offers UG, PG Courses with an intake of 120 and 18 respectively and facilitates R&D through VTU recognized research center. The department has received funds from various reputed agencies like AICTE, VGST, KSCST, ISRO, ISTE, etc., for its activities.

## Objectives of the Course:

Competence in technical writing holds great importance in the present era. Technical writing deals with specific knowledge, generally in the sphere of science and technology, and may be used in a wide variety of media: journal papers, thesis, project proposals, and other technical documents. DEEP LEARNING AI is a document typesetting system that is used to produce high quality scientific documents, like articles, books, dissertations, technical reports, etc. Expertise in drafting technical documents is an indispensable skill for all professionals for it helps them to share their knowledge of technical subjects effectively in all domains of society and thus makes them competent in their professional careers

### Resource Person:

Dr. Adarsh M J.

Associate Professor

Dept of CS&E, AIT, Chikkamagaluru

### Convenor:

Dr Pushpa Ravi kumar, Professor and Head, Dept. of CS&E.

### Coordinator:

Mr. S J Prashanth, Asst Professor, Dept. CS&E, AIT, Chikkamagaluru



## | | Jai Sri Gurudev | |



# SRI ADICHUNCHANAGIRI SHIKSHANA TRUST ® ADICHUNCHANAGIRI INSTITUTE OF TECHNOLOGY, CHIKKAMAGALURU

P.B No.91, Adichunchanagiri Extension, Chikkamagaluru-577 102, Karnataka ,India.

Ref: AIT/IQAC/CSE/

/2018-2019

Date: 10/06/2018

## Circular

Department of Computer Science & Engineering is conducting a Certificate Program (Add-on Program) on "Deep Learning: AI [19CS\_AC\_013] from 18-06-2018 to 02-07-2018 All other HOD's instruct the concern department students to attend the program. Following faculty member (Course instructor) is conducting a certificate program at CS&E Department.

### Course Instructor

- Prof. Vivekananda
   Assistant Professor
   Dept. of CS&E
   AIT Chikmagalur
- Prof. S J Prashantha Assistant Professor Dept. of CS&E AIT Chikmagalur

Professor and H.O.D.

Departmend's Signaturecience and Engage
Adichunchanagiri Institute of Technology
CHIKMAGALUR - 577102

Principal Signature

Principal B.E.,M.Tech.,Ph.D

Principal B.E.,M.Tech.,Ph.D Adichunchanagiri Institute of Technology CHIKKAMAGALURU-577102

# Add on course - 30 Hours

ADD on Course Name: Deep Learning: AI

Course Code: 19CS\_AC\_013



### Module 1:

10 Hours

10 Hours

Basic Concepts of Machine Learning: Machine Learning Systems ,Supervised Learning , Learning Algorithms Parametric Models ,Cost functions ,Generalization ,Regularization ,Evaluation of a Binary Classifier , Confusion Matrix ,Receiver Operating, Characteristic Curve , Precision Recall Curve.

Module 2:

Artificial Neural Networks: Basic Concepts ,Feed forward Neural Networks ,Single-Layer Perceptron ,Multilayer Perceptron ,ANN Learning Gradient Descent Methods ,Back-propagation Algorithm ,Regularization

Module 3: 10 Hours

Convolutional Neural Networks :Convolution Operation . Convolution in Mathematic and Image Processing Convolution in Neuroscience ,Convolutional Network Architecture . Convolutional Layer . Pooling .. Batch Normalization . Main Concepts Behind CNNs . Local Receptive fields. Parameter Sharing . Popular CNN Architectures .

### **TEXT BOOKS:**

1. Neural Networks and Deep learning: A Text book by Charu C.Aggarrwal 2018

ADD on Course Name: Deep Learning: AI

Course Code: 19CS\_AC\_013

Branch: CSE

# Student Enrollment List

SI NO	NAME	USN	SIGNATURE				
		4AI14CS012	Aportiva S.R.				
1	APOORVA S R	4AI14CS026	Devel				
2	DEEKSHA K N	4AI15C5002	Abtalast				
3	ABHISHEK G	4AI15CS028	Chambragh				
4	CHANDANA PH	4A/15CS051	karshik S.D.				
5	KOUSHIK S D	4A/15CS064	NGL				
6	NIDHI A R	4AI15C5103	el de la companya del companya de la companya de la companya del companya de la companya del companya de la companya de la companya de la companya de la companya del companya de la companya dela companya de la companya de la companya dela co				
7	SIDDANTH B K	4A/16C5002	adv.				
8	ADYA H N	4AI16CS003	STELL STELL				
9	AGNES SANMATHI D	4A/16CS004	Albe				
10	ALFIYA BANU	4AI16CS006	Angelya				
11	ANANYA K V	4AI16CS007	hould				
12	ANUSHA K N	4A/16C5008	Article 1				
13	ANUVIKA A S		front-gerore				
14	ARVIND GIRISH	4AI16CS009	Bazila.				
15	BABITHA B	4AI16CS011	D)				
16	BHAGYASHREE H D	4AI16CS012	D. N.				
17	BHOOMIKA G S	4AI16CS013	Shostande				
18	BHOOMIKA K	4AI16CS014	Bhom				
19	BINDUSHREE C .	4AI16CS015	Bhomis				
20	BINDUSREE B R	4AI16CS016	Bindustance R				
21	BRUNDA D	4AI16CS017	Brush				
22	CHANDANA H Y	4AI16CS018	- Charles				
13	CHINMAYEE	4AI16CS019	Cocces				
4	CHINTHANA M C	4AI16CS021	chiththanh.				
5	CHIRAG M R	4AI16CS022	Chierag ny				
6	DEEPAK N R	4AI16CS023	alapale N.Z.				
7	DEEPIKA D P	4A/16CS024	Rapiko V.				
8	GADDI CHETAN	4A/16CS025	Colon Colon				
9	GOURAV B R	4AI16CS026	Gautien				
0	HARSHA H K	4AI16CS027	Avilla.				
1	JAYASHREE	4AI16CS028	Jaysana				
2	JEEVAN A S	4A/16CS029	Jeevain				
3	KALPASHREE Y	4AI16CS030	Lagheithrere				
	KARTHIK N L	4AI16CS031	Kathyle NL				
	KAVYA S	4AI16CS032	*avjasr				
	KAVYA S K	4AI16CS033	Yovya S. E				
	KAVYASHREE C M	4AI16CS034	Karyashree				
	KHALEEL AHAMED	4AI16CS035	Khalell				
-	KOWSHIK V	4AI16CS036	Koursher.				
	(RUTHIKA G NAYAK	4AI16CS037	Kaulisha fo				
-	EANDRA MARIA MENDON	4AI16CS038	Lankle Cl				

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M	OHAMMED NIHAL KHAN	4AI16CS043	Mohamus Khor
M	I ANUOI	4AI16CS044	Now
N	IAMITHA M TAPSE	4AI16CS046 ·	Marker
7 1	NAVEEN P PARVATHANENI	4AI16CS047	gens
8	NAYANA K S	4AI16CS048	Mareen.
19	NESARA B R	4AI16CS049	Nove-
50	NISCHITHA K S	4AI16CS051	11110
51	NISHANTH K R	4AI16CS052	(Subject 1)
52	NISWARTH V SHETTY	4AI16CS053	Wakan
53	P PRADEEP KUMAR	4AI16CS054	D. J. C.
54	POOJA B R	4AI16CS055	Reel Court
55	POOJA B S	4AI16CS056	950
56	POOJA N K	4AI16CS056 4AI16CS057	0
57	POOJAS	4AI16CS057 4AI16CS058	Porta NK
58	POORNIMA C L	4AI16CS058 4AI16CS059	Kolaty
59	RACHANA N VANAGUR	4AI16CS062	Pop hlow
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61	RAHULS	4AI16CS064	4 out
62	POOJA C P	4AI16CS127	Juli Si
63	ALFIYA SHAIK	4AI16CS13D	gooia-
64	AMBIKA D P	4AI17CS400 ·	Alifa shall
65	SHASHIKALA S	4AI17CS407	Mabike
66	VIJETHA B S	4AI17CS409	Vivou
67	SHREYA B R	4AI16CS085	300
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72	SINCHANA S GOWDA	4AI16CS090	Sinhe
73	SNEHA K	4AI16CS091	Shell
74	SOUMYA H	4AI16CS092	Someta
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76	SOURAB SAKLECHA	4AI16CS094	Sautato.
77	SOWMYA M	, 4AI16CS095	Source
78	SPANDANA H P	4AI16CS096	Spandana
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84	SOMMENT	4AI16CS102	Sunantee
85	JOHN IN THE PROPERTY OF THE PR	4AI16CS103	Suportak
86	SUPRIYA S K	4AI16CS104	New hour

Course Instructor Signature

Professor Sign: Hube D.

Department of Company Science and Engg.

Adichunchanag Butiles of Vechnology

CHIK. ASALUR - 577-02

ADD on Course Name: Deep Learning:AI

Course Code: 19CS\_AC\_013

Branch: CSE

Students are identified for ADD on Course Classes based on their enrolment.

ADD on Course classes will be held during 18-06-2018 to 02-07-2018 at CS&E dept from 4-6pm

# **Attendance Report**

SI	NAME	USN	. During 18-06-2018 to 02-07-2018						Signature									
NO			-	12	3	4	5	6	7	8	9	10	11	12	13	14	15	
			1	2		1000	P	-	P	P	P	A	P	P	P	P	P	ADDOGNAA SI
1	APOORVA S R	4A/14CS012	P	8	P	P	-	P	1	-	-		P	P	P	P	P	Dec Ruho Kr
2	DEEKSHA K N	4AJ14CS026	A	P	P	P	7	P	P	P	P	P	P	P	P	P	P	abjet
3	ABHISHEK G	4A/15CS002	P	P	P	P	P	P	P	P	P	P	-	-	P	P	P	chero
4 .	CHANDANA P.H	4AI15CS028	P	P	7	P	P	P	P	P	P	P	P	A	P.	P	P	RODANS
5	KOUSHIK S D	4AI15CS051	P	P	P	P	P	6	10	P	9	P	A	A		P	P	Midhows
6	NIDHI A R	4AI15CS064	P	P	P	P	P	P	P	P	P	P	A	A	P	P	P	
7 .	SIDDANTH B K	4AI15CS103	P	P	P	P	P	P	P	A	A	A	1	P	P	-	-	Side with
8	ADYA H N	4AI16CS002	P	P	P	P	P	P	P	P	P	P	P	9	P	P	P	Adyath
9	AGNES SANMATHI D	4AI16CS003	P	P	P	P	P	P	P	A	A	P	P	P	P	P		Agrily Smith D
10	ALFIYA BANU	4AI16CS004	P	P	P	P	A	P	P	P	P	P	P	P	P	P	P	Altrija barri
11	ANANYA K V	4AI16CS006	P	A	P	A	P	P	P	P	P	P	P	A	P	P	P	Photograph 1
12	ANUSHA K N	4AI16CS007	P	P	P	P	P	P	A	A	A	;A	P	P	P	P	P	A saula
13	ANUVIKA A S	4AI16CS008	P	A	A	P	P	P	P	A	P	P	P	P	P	P	P	Bound Lang
14	ARVIND GIRISH	4AI16CS009	P	P	P	P	P	P	P	P	P	P	P	A	A	P	A	Agaruja in
15	ВАВІТНА В	4AI16CS011	P	P	A	A	P	P	P	P	P	P	A	P	P	P	P	Balit
16	BHAGYASHREE H D	4AI16CS012	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	Braggo
17	BHOOMIKA G S	4AI16CS013	P	P	P	P	P	P	P	A	A	A	P	P	P	P	P	Breeze
18	BHOOMIKA K	4AI16CS014	P	P	P	P	P	A	A	P	P	P	P	P	P	P	P	Broom
19	BINDUSHREE C	4AI16CS015	P	P	P	p	P	P	P	P	P	A	P	P	P	A	P	Birtell
20	BINDUSREE B R	4AI16CS016	P	P	P	P	P	A	P	P	P	P	P	P	P	P	P	Ras
21	BRUNDA D	4AI16CS017	P	P	P	P	P	P	A	A	P	P	P	P	P	P	P	Disother
22	CHANDANA H Y	4AI16CS018	A	A	A	P	P	P	A	P	P	P	P	P	P	P	P	Betal
23	CHINMAYEE	4AI16CS019	P	P	P	A	P	P	A	P	P	P	P	A	P	P	P	(stana
24	CHINTHANA M C	4AJ16CS021 -	A	A	P	P	P	P	P	P	P	P	A	P	P	P	P	(mint
25	CHIRAG M R	4AI16C5022	P	D	P	P	P	P	P	P	P	P	P	P	P	P	P	Charact
26	DEEPAK N R	4AI16CS023	P	P	P	P	P	P	P	P	P	0	P	P	A	P	0	Devor
27	DEEPIKA D P	4AI16CS024	D	A	P	P	A	p	P	P	P	P	P	P	A	P	P	person
28	GADDI CHETAN	4AI16CS025	P	P	A	P	P	A	P	P	P	P	P	P	P	P	P	Gradas
29	GOURAV B R	4AI16CS026	P	P	A	P	P	P	P	P	P	P	P	P	P	P	P	house
30	HARSHA H K	4AI16CS027	à	P	P	P	P	P	P	P	P	P	D	A	P	P	P	teur
31	JAYASHREE	4AI16CS028	0	A	P	P	P	P	P	P	P	P	P	0	P	P	A	Jacobs
32	JEEVAN A S	4AI16CS029	0	A	P	P	P	0	P	P	P	P	P	P	P	0	P	Teven
33	KALPASHREE Y	4AI16CS030	P	P	P	P	P	P	P	P	0	A	P	P	D	P	P	
34	KARTHIK N L	4AI16CS031	P	A	P	P	P	P	P	P	P	0	0	0	P	P	P	radic
35	KAVYAS	4AI16CS032	0	A	P	o	P	P	P	P	P	P	P	0	D	P	0	1
36	KAVYASK	4AI16C5033	P	P	P	0	A	0	P	P	P	P	P	P	-	P	0	kanaya
37	KAVYASHREE C M	4AI16CS034	P	P	0	P	P	P	A	A	P	P	P	P	P	-	-	K-ya
38	KHALEEL AHAMED	4A/16C5035	P	P	A	P	P	6	-	-	-	1	+	-	P	P	P	Karya.
	MINICELATIVATED	4/11003033	1	1	14	P	1	1	P	P	IP	P	P	P	A	P	P	Khali.

39	KOWSHIK V	4AI16CS036	P	P	P	P	P	P	P	P	P	P	P	A	P	P	P	Kal
10	KRUTHIKA G NAYAK	4AI16CS037	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	Krust.
11	LEANDRA MARIA MENDON	4AI16CS038	A	P	P	P	p	P	P	P	P	A	A	P	P	P	P	Leant
42	MANISHA P BEERAIAH	4AI16CS040	A	P	P	P	P	P	P	P	P	P	ρ	P	P	P	P	mary
43	MEGHANA D Y	4AI16CS042	P	P	P	P	p	P	P	A	P	p	p	P	P	P	P	Memani
44	MOHAMMED NIHAL KHAN	4AI16CS043	A	P	p	P	P	P	P	ρ	P	P	P	P	P	A	P	wender
45	MOUNAJ	4AI16CS044	P	P	P	P	P	P	P	A	P	P	P	A	P	P	P	MOREDIEN
46	NAMITHA M TAPSE	4AI16CS046	P	P	P	P	p	P	P	P	P	P	P	A	P	P	P	Morrisham
47	NAVEEN P PARVATHANENI	4AI16CS047	P	P	P	P	P	ρ	P	P	P	P	A	P	P	P	P	Naveen
48	NAYANA KS	4AI16CS048	P	A	P	P	P	P	P	P.	P	P	P	P	P	P	P	1400
49	NESARA B R	4AI16CS049	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	nerara
50	NISCHITHA K S	4AI16CS051	A	P	P	P	P	P	ρ	P	P	P	P	P	P	P	P	News
51	NISHANTH K R	4AI16CS052	P	P	0	A	P	P	A	P	P	P	P	P	P	P	P	Nishaust
52	NISWARTH V SHETTY	4AI16CS053	P	P	P	P	P	P	P	P	P	A	P	P	P	P	P	N. 13 80 12
53	P PRADEEP KUMAR	4AI16CS054	A	P	P	P	P	P	P	P	P	P	P	P	P	P	P	Proceeded
54	POOIA B R	4AI16CS055	P	P	P	P	A	P	P	P	P	P	P	P	P	P	P	Peo jor
55	POOJA B S	4AI16CS056	A	D	P	P	P	ρ	P	A	P	P	P	P	P	P	P	Host
56	POOJA N K	4AI16CS057	P	P	P	P	P	P	P	P	P	P	A	P	P	P	P	1
57	POOJAS	4AI16CS058	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	follow
58	POORNIMA C L	4AI16CS059	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	Person
59	RACHANA N VANAGUR	4AI16CS062	P	P	P	P	0	P	A	P	P	P	P	P	P	P	P-	REV
60	RAHUL A	4AI16CS063	P	D	P	P	P	P	P	P	P	P	P	A	P	P	P	Kenthi
61	RAHUL S	4A)16CS064	A	A	P	P	P	P	P	P	P	P	A	P	P	P	P	(Bhr
62		4A/16CS127	P	0	P	A	P	P	P	P	P	P	P	P	P	P	P	POOTA .
63	POOJA C P	4AI16CS130	P	0	D	A	P	P	P	P	P	A	P	A	P	P	P	Ale
64	ALFIYA SHAIK AMBIKA D P	4AI17CS400	P	A	P	P	P	P	P	P	P	P	A	P	P	P	P	2
65		4AI17CS407	P	P	A	P	P	P	P	P	P	P	P	P	P	A	P	40
66	VUETHA B S	4AI17C5409	P	P	P	P	P	A	P	P	P	P	P	P	P	P	P	1/20
67		4AI16C5085	P	P	+ +	P	P	P	P	P	P	P	P	P	A	P	P	200
68	- Commence of	4AI16CS086	P	P	A	A	P	P	p	P	P	P	R	P	P	P	P	Dik
69	Similaria	4AI16CS087	D	P	P	P	P	P	D	P	P	P	6	P	A	P	P	Shubt
70	Stillettettet	4AI16C5088	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	siddel
71	0.00000	4A/16C5089	P	P	P	P	P	P	P	P	P	A	P	P	P	P	P	Sincha
72	Directoration	4AI16CS090	P	P		P	P	P	P	P	P	9	P	P	P	P	P	Sishech
73	- Circumstation of the Circums	4AI16CS091	A	A	P	P	P	P	P	P	P	P	P	9	P	P	P	Sneha
74	- Citation	4AI16CS092	P	10	P	P	P	0	P	P	4	P	P	P	P	P	P	down
75	00011111111	4AI16CS093	P	P	P	P	P	A	A	P	P	P	P	P	P	P	P	11
76	000110111111111111111111111111111111111	4AI16CS094	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	Source
77		4AI16CS095	P	P	P	P	P	P	P	P	P	P	P	P	P	A	P	Berry
78		4AI16CS096	P	P	P	P	P	P	P	P	P	A	A	P	P	P	P	Spandan
79		4AI16CS097	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	Som
80	The state of the s	4AI16CS098	F	P	P	P	P	P	P	P	P	P	P	P	P	P	P	503
81		4AI16CS099	P	-	P	P	P	P	P	P	P	P	P	A	P	P	P	12 XOS
82	3,00,000	4AI16CS100	P	P	P	P	A	P	P	P	P	P	A	P	P	P	P	PULB.
83		4AI16CS101	P	P		P	P	A	P	P	P	P	P	P	P	P	P	Shows V
	SHOSTITUS	4AI16CS102	P	P	P	P	P	P	A	A	P	P	P	P	P	P	P	Sumant
84				_	-	-	-		1	1 -	1 /		1 0	1 0	1 0	-	1	
84	JOHNSTIN	4A/16CS103	P	P	P	P	18	P	P	P	14	P	P	P	P	P	P	Supr
	SUPRITH K	4AI16CS103 4AI16CS104	P	P	P	P	P	P	P	P	A	A	P	P	P	P	P	Supr

Course Instructor Signature

HOD Signature

Professor and H.O.D.

Department of Computer Science and Erroy.
Adichunchanagiri Institute of Technology
CHIKMAGALUR - 577102

ADD ON COURSE NAME: DEEP LEARNING: AI

COURSE CODE: 19CS\_AC\_013 ASSESSMENT QUESTIONS

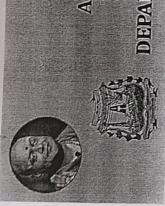
### LIST OF TOPPERS

SLNo	Name of the Student	USN	Marks Scored
1	Vaishnavi C O	4AI16CS114	50
2	Sumantha M K	4AI16CS102	49
3	Sristi Bagamane	4AI16CS100	48

Signature of the H.O.D

Professor and H.O.D.

Department of Computer Science and Engg. Adichunchanagiri Institute of Technology CHIXMAGALUR - 577 102



||Jai Sri Gurudev||

Sri Adichunchanagiri Shikshana Trust (R)

ADICHUNCHANAGIRI INSTITTUTEOF TECHNOLOGY

CHIKKAMAGALURU - 577 102

DEPAIRTMENT OF COMPUTIER SCHENCE AND ENGINEERING



# Certificate of Participation

This is to certify that POOJA B R has successfully completed the add on course on "Deep Learning :AI" from 18-06-2018 to 02-07-2018 organized by Department of Computer Science and Engineering.

Prof. S J Prashantha Staff co-ordinator

Prof. Vivekananda Staff co-ordinator

Professor and H.O.D.
Depalbrektishparkavikainae and Engalichunchanggiologitute of TechnochikMAGALUR - 577102

ADD ON COURSE NAME: DEEP LEARNING: AI

COURSE CODE: 19CS\_AC\_013

ASSESSMENT QUESTIONS



Max Marks: 50

Na	ame of the Student: Apporva S. R
US	SN: HAIIHCSOI2
	Which of the following is a subset of machine learning?  A. Numpy B. SciPy . Deep Learning D. All of the above
~	How many layers Deep learning algorithms are constructed?  A. 2
1/	The first layer is called the?  C. hidden layer D. None of the above
	RNNs stands for?  A. Receives neural networks  B. Report neural networks  C. Recording neural networks
X A	Which of the following is/are Common uses of RNNs?  A. Businesses Help securities traders to generate analytic reports  Detect fraudulent credit-card transaction  C. Provide a caption for images  D. All of the above
./	NN is mostly used when there is an?  structured data D. unstructured data C. Both A and B D. None of the above
X A.	A Shallow neural network  Shallow neural network  Feed-forward neural networks  D. Recurrent neural networks

8. Deep learning algorithms are more accurate than machine learning algorithm in image classification
A. 33% B. 37% C. 40% D. 41%
9. In which of the following applications can we use deep learning to solve the problem?
A. Protein structure prediction  B. Prediction of chemical reactions  C. Detection of exotic particles  D. All of the above
10. The number of nodes in the input layer is 10 and the hidden layer is 5. The maximum number of connections from the input layer to the hidden layer are
A. 50 B. less than 50 Q. more than 50 D. It is an arbitrary value
11. The input image has been converted into a matrix of size 28 X 28 and a kernel/filter of size 7 X 7 with a stride of 1. What will be the size of the convoluted matrix?
A. 20x20 D. 21x21 C. 22x22 D. 25x25
12. In a simple MLP model with 8 neurons in the input layer, 5 neurons in the hidden layer and 1 neuron in the output layer. What is the size of the weight matrices between hidden output layer and input hidden layer?
A. [1 X 5], [5 X 8] P. [5 X 1], [8 X 5] C. [8 X 5], [5 X 1] D. [8 X 5], [1 X 5]
13. Which of the following functions can be used as an activation function in the output layer if we wish to predict the probabilities of n classes (p1, p2pk) such that sum of p over all n equals to 1?
A. Softmax B. ReLu C. Sigmoid D. Tanh
14. Assume a simple MLP model with 3 neurons and inputs= 1,2,3. The weights to the input neurons are 4.5 and 6 respectively. Assume the activation function is a linear constant value of 3. What will be the output?
A. 32 B. 64 €. 96 D. 128
15. Sentiment analysis using Deep Learning is a many-to one prediction task.
A. True B. False C. Can be true and false D. can not say
16. In CNN, having max pooling always decrease the parameters?
A. True B. False C. Can be true and false D. cannot say
17. When an experienced deep learning engineer works on a new problem, they can usually use insight from previous problems to train a good model on the first try, without needing to iterate multiple times through different models.?
True B. False

18. Which of the factors affect the performance of learner system does not include?
a) Representation scheme used b) Training scenario
c) Type of feedback Good data structures
19. Different learning methods does not include?
a) Memorization b) Analogy c) Deduction d) Introduction
20. In language understanding, the levels of knowledge that does not include?
a) Phonological b) Syntactic Empirical d) Logical
21. A model of language consists of the categories which does not include?  a) Language units b) Role structure of units System constraints d) Structural units
22. Among the following which is not a horn clause?  a) p $\longrightarrow \emptyset$ $\emptyset$ $\emptyset$ $\emptyset$ $\emptyset$ $\emptyset$ $\emptyset$ $\emptyset$ $\emptyset$ $\emptyset$
23.Type of matrix decomposition model is
A. predictive model D. descriptive model C.logical model D.None
24. PCA is
C. feature extraction D. None of these
25. Supervised learning and unsupervised clustering both require which is correct according to the statement.
input attribute B. hidden attribute C.output attribute D.categorical attribute
26. Following are the types of supervised learning
A. Regression B. classification C. subgroup discovery D. All of above
27. A feature F1 can take certain value: A, B, C, D, E, & F and represents grade of students from a college. Here feature type is
A. Ordinal B. nominal C. categorical D. Boolean
28. Following is powerful distance metrics used by Geometric model
A. Manhattan distance B. Euclidean distance . All of above D. None of above
29. The output of training process in machine learning is
A. Machine learning algorithm.   Machine learning model C. Null D. accuracy

30. Which of the following is a good test dataset cl	naracteristic?
A. is representative of the dataset as a whole     B. large enough to yield meaningful results	
C. All of above	
None of above	
31. Which of the following techniques would perf	form better for reducing dimensions of a data set?
A. removing columns which have high variations of the above	missing value
32. You are given reviews of few Netflix series is an example of	narked as positive, negative and neutral. Classifying reviews
~	emi supervised learning einforcement learning
33. Like the probabilistic view, the	ew allows us to associate a much shift.
each classification	ew allows us to associate a probability of membership with
	classical D. inductive
34. Database query is used to uncover this type	of knowledge.
X. Hidden B. shallow C. Deep D.	multidimensional
Data used to build a data mining model.      A. Training data     B. hidden data	
36. If machine learning model output doesn't in called as	test data D. validation data
A. predictive model . descriptive mo	del C. reinforcement
37. In the example of predicting number of bab	oies based on stork's population, Number of babies is
V.o	uicome D.attribute
38. Following are the descriptive models	
A. Classification p	association rule De Both 1 and 2
39. What does dimensionality reduction reduce	o our rang 2
V. Collinearity Parent	ntropy D. performance

40. Which of the following is the best machine learning method?
A. Accuracy B. scalable C. fast D. All of above
41. In multiclass classification number of classes must be
A. Equals to two B. less than two S. greater than two D. None
42. Which of the following can only be used when training data are linearly separable?
A. linear logistic regression C. linear soft margin svm D. parzen windows
43. Impact of high variance on the training set?
A. underfitting
44. The effectiveness of an SVM depends upon
A. kernel parameters B. selection of kernel C. soft margin parameter D. All of the above
45. Feature can be used as a
M. predictor B. binary split C. All of above D. None of above
46. Which of the following evaluation metrics can not be applied in case of logistic regression output to compare with target?
A. Accuracy B. auc-roc C. logloss
47. A measurable property or parameter of the data-set is
A. training data B. test data . feature D. validation data
48. Support Vector Machine is
49. Imagine a Newly-Born starts to learn walking. It will try to find a suitable policy to learn walking after repeated falling and getting up. Specify what type of machine learning is best suited?
A. Regression B. means algorithm . reinforcement learning D. None
50. Different learning methods does not include?
A. Deduction B. memorization C. analogy . Introduction

### ADICHUNCHANAGIRI INSTITUE OF TECHNOLOGY, CHIKKAMAGALURU-577102. DEPARTMENT OF COPMUTER SCIENCE & ENGINEERING

### Add-On Course on "Deep Learning :AI"

### OVER ALL Add-On Course PARTICIPANTS FEEDBACK

Sl.No	DESCRIPTION	EXCELLENT	GOOD	POOR
1	How would you rate the presenter's knowledge on the concept?	/		
2	How would you rate the concepts and Information provided by the Presenter?	V		
3	What was your overall impression of the session?			1
4	Remarks	Got se after sess	ome Kno altending ion,	w ledge the

Signature of the Participants

### ADICHUNCHANAGIRI INSTITUTE OF TECHNOLOGY CHIKKAMAGALURU **Department of Computer Science & Engineering**

### **Summary Report**

The course "Deep Learning:AI" was conducted at CS&E Dept from 18/06/2018 to 02/07/2018.

The main objective of this course is to make students comfortable with tools and techniques required in handling large amounts of datasets. They will also uncover various deep learning methods in NLP, Neural Networks etc. Several libraries and datasets publicly available will be used to illustrate the application of these algorithms. This will help students in developing skills required to gain experience of doing independent research and study.

### Course Outcomes

Students are able to

- Understand the informed and uninformed problem types and apply search strategies to solve them.
- Apply difficult real life problems in a state space representation so as to solve them using AI techniques like searching and game playing.
- Design and evaluate intelligent expert models for perception and prediction from intelligent environment.
- Formulate valid solutions for problems involving uncertain inputs or outcomes by using decision making techniques.
- Demonstrate and enrich knowledge to select and apply AI tools to synthesize information and develop models within constraints of application area.

 Examine the issues involved in knowledge bases, reasoning systems and planning

Instructor's Signature

HOD's Signature.

Professor and H.O.D Department of Computer Science and Adichunchanagiri Institute of Technology CHIKMAGALUR - 577102

### ADD ON COURSE

ON

"BASICS OF SOFTWARE TESTING"





**ADD-ON Course** 

On

"Basics of Software Testing"





Organized by,

Department of Computer Science and Enginering. of Institute Adichunchanagiri Technology, Chikmagalur – 577102 Karnataka. India www.aitchikmagalur.ac.in

### About the College:

of Institute Adichunchanagiri Technology (AIT) was established in the year 1980 under the auspicious of Adhichunchanagiri Shikshana blessings Trust(R) with the Jagadguru Bhairavaikya Padmabhushana Sri Sri Sri Dr. Balagangadharanatha

Mahaswamiji to provide technical and other professional education in the rural area of Chikmagalur, the land of blessings of Coffee. With the Sri. Sri. Sri. Jagadguru Nirmalanandanatha Swamiji, AIT is imparting the quality education in Engineering and Management with ethical and spiritual values. The have departments engineering

recognized as research centers under VTU. The college has well equipped laboratory facilities and highly qualified and experienced faculty. The Institute is providing good training for students to excel in academics as well as in industry requirements and aims towards 100% placements to give a better future for students.

### About the Department:

The Department of Computer Science and Engineering is established in the year 1986. It was earlier affiliated to the Mysore University later to the Kuvempu University and at present, it Visvesvaraya affiliated to Technological University, Belagavi. The alumni of the department are various in organizations in India and abroad. The department is accredited twice by National Broad of Accreditation, New Delhi.

The department offers UG, PG Courses with an intake of 120 and 18 respectively and facilitates R&D through VTU recognized research center. The department has received funds from various reputed agencies like AICTE, VGST, KSCST, ISRO, ISTE, etc., for its activities.

### Objectives of the Course:

Software Testing is a method to check whether the actual software expected matches product requirements and to ensure that software product is Defect free. It involves execution of software/system manual components using automated tools to evaluate one or more properties of interest. The purpose of software testing is to identify errors, gaps or missing requirements in contrast to actual requirements.

Software testing definition as a White Box and Black Box Testing. In simple terms, Software Testing means the Verification of Application under Test (AUT). This Software Testing course introduces testing software to the audience and justifies the importance of software testing.

### Resource Person:

Mr. CHETHAN P J

Assistant Professor

Dept of CS&E, AIT, Chikkamagaluru

### Convenor:

Dr Pushpa Ravi Kumar, Professor and Head, Dept. of CS&E.

### Coordinator:

Mr. Gopinath C B, Asst Professor, Dept. CS&E, AIT, Chikkamagaluru

## ADICHUNCHANAJIRI INSTITUTE OF TECHNOLOGY CHIKKAMAGALURU-577102 DEPARTMENT OF COMPUTER SCIENCE & ENGINEERING ADD-ON Course - Basics of Software Testing

Student Enrollment List

NSO	Student Name	
4AI16CS041	M D ZAHID HUSSAIN	
4AI16CS069	ROHITH KUMAR SINGU	
4AI17CS062	POOJA H B	
4AI17CS063	POOJA K R	1000 H 3.
4AI17CS064	PRAGATHI HEBBAR K M	o The Control of the
4AI17CS065	PRAJWALA D E	Principal DIS
4AI17CS066	PRAJWAL M D	OF SOM
4AI17CS069	PREETHI N U	Title C
4AI17CS070	PRERANA M V	A Anna III
4AI17CS071	PRIYANKA T M	P.O. C. C. T.
4AI17CS072	RAHUL PRABHIUK	Out Out
4AI17CS074	RAKSHITH H D	Rakshito. H. A
4AI17CS075	RANJANA A	Rowins P.
4AI17CS076	ROHITH VINOD HUKKIERI	Red To
4AI17CS077	SADHANA P.HEBBAR	Sadlova. P. Hebbay
4AI17CS078	SAHANA M N	of abanamon MV
4AI17CS080	SANJAN R	Samples ?
4AI17CS081	SANJANA S	Sy Outofus
4AI17CS082	SANJITHA P	Somittop
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### ADICHUCHANAGIRI INSTITUTE OF TECHNOLOGY, CHIKKAMAGALURU DEPARTMENT OF COMPUTER SCIENCE & ENGINEERING ADD ON COURSE: BASICS OF SOFTWARE TESTING

### **Toppers List**

Sl.No	Student Name	Student USN	Marks Obtained
1	SHANMUKA G C	4AI17CS083	48
2	SHEEBA SUFIYA	4AI17CS089	47
. 3	SUHAS GOWDA	4AI17CS103	46

Signature of EOD

Professor and Fig.

Department of Computer Science and Engg.

Adichunchanagiri Institute of Technology

CHIKMAGALUR - 577102

### DEPARTMENT OF COMPUTER SCIENCE & ENGINEERING ADD ON COURSE: BASICS OF SOFTWARE TESTING SEMESTER: IV Student Name: \_\_ Shanmuka GC Max Marks: 50 Note: There are 50 multiple choice questions. All questions are compulsory. Each question carries 50\*1=50 1. A deviation from the specified or expected behavior that is visible to end-users is called: a) An error b) a fault c) a failure d) a defect 2. A configuration management system would NOT normally provide: a) Linkage of customer requirements to version numbers. b) The precise differences in versions of software component source code. (a) Facilities to compare test results with expected results. d) Restricted access to the source code librar 3. Test cases are designed during: c) Test planning. b) Test configuration. a) Test recording. 4. Which of the following statements about reviews is true? a) Reviews should be performed on specifications, code, and test plans b) Reviews are the least effective way of testing code. c) Reviews are unlikely to find faults in test plans. d) Reviews cannot be performed on user requirements specifications. 5. In case of Large Systems b) Test Cases written by good test engineers should be executed a) Only few tests should be run Testing should be on the basis of Risk c) Only Good Test Cases should be executed 6. Which of the following will be the best definition for Testing: Testing is executing Software for the purpose of finding defects b) The purpose of testing is to demonstrate that the program is defect free c) The purpose of testing is to demonstrate that the program does what it is supposed to do d) The goal / purpose of testing is to demonstrate that the program works. 7. Which of the following is not a type of incremental testing approach? d) Functional incrimination c) Bottom up b) Top down Fil at Big-bang 8. Test Conditions are derived from d) Specifications c) Test Data b) Test Cases a) Test Design 9. Pick the best definition of quality d) Conformance to c) Work as designed b) Zero defects a) Quality is job one requirements a) Creating a test case which does not reveal a fault \_\_b) Effor condition hiding another error condition c) Masking a fault by developer

11. Boundary value testing

a) Is the same as equivalence partitioning tests

b) Tests combinations of input circumstances

ce) Test boundary conditions on, below and above the edges of input and output equivalence classes

d) Is used in white box testing strategy

1-		cal documentation	have difficulty to b) Lack of to d) Lack of tr	testing their own work est tools on the market aining	is: for developer's
1-	13. In a review m a) Takes minutes c) Mediates betw	neeting a moderator of the meeting een people	is a person who: b) Take d) writes	es telephone calls the documents to be re	eviewed
-1-		est cases are based o b) Design	on what? c) Code	d) Requireme	nts
1-	15. How much te a) This question is c) The answer de d) This answer de	is easy to answer	your industry, co	This question is imposs ontract and special requ pers	sible to answer irements
-   -	16. which of the a) IEEE 610	following is the com b) IEEE 829	ponent test standa c) BS7925-1	ard? _d) <del>B87</del> 925	2
-11.	17. Which of the a) IEEE610	following is NOT a s b) IEEE829	standard related to c) BS7925-1	o testing? d) BS7925-2	
·  -	18. The standard tale a) ISO/IEC 12207	hat gives definitions (هه BS 7925	of testing terms i	s: SI/IEEE 729 d)	ANSI/IEEE 829
1'	<ul><li>a) Incidents are rauser requirements.</li><li>c) Incidents require</li></ul>	e investigation and/o	and actual results or correction.	differ. b) Incidents	may be raised against
- 1 1 2	b) A fault need not A system is nece	different failures ma affect the reliability	of a system.	for the removal of a fac	ılt.
/ a		llowing is the odd or  b) Functional	ne out? c) Structural	d) Glass box	
$\left  -\frac{2}{a} \right $	2. Which of the following Coverage analysis	llowing is a static tess s		ability assessment	d) Installation test
23 a)	3. Which of the fol statement testing	lowing is a black bo b) error- gue			ng d) usability testing
24 a)	. Which of the foll Design based	owing is not the into b) Bottom-up			
a) .	o find faults in th	owing is NOT a rease e software oftware has no fault		ctive? b) To give confidence d) To find performand	in the software

	a) Non-functional system testing	Door A		
	a) Non-functional system testing	pact Analysis most?		
	d) Maintenance testing	b) Component testing	c) Hear account	
	07 Fam.		c) User acceptance	testing
	27. Expected results are:			
	a) Only important in system testing component testing d)	1/ 1-		
	component testing	Doring I Company of the Special When special I Company of the Special	cified in advance	
	20 117	Derived from the code	in devance	c) Only used in
	28. What type of review requires for	mal		
-	28. What type of review requires for a) Management review <u>b) Ins</u>	pection c) Walkthrough	cluding metrics?	
	20 TI 1100	pection c) Walkthrough	gh d) Post pro	oject review
,	29. The difference between re-testing a) Re-testing ensures the original fau	o and recover:		Journal
-1	a) Re-testing ensures the original fau testing looks for unexpected side-eff	If has been remarked is:		
	testing looks for unexpected side-effe	ects	on	
	) - to tolding looks for important	-		
	ensures the original fault has been reco	moved		
	c) Re-testing is done by developers; rindependent testers	regression testing is done by		
	d) Re-testing is down as	, 5		
	d) Re-testing is done after faults are fearlier	ixed; regression testing is dor	ne	
	-			
0-	30. Given the following types of tool	which as the state of the state of		
~	30. Given the following types of tool, an independent system test team?	willen tools would typically	be used by developer	s, and which by
	i) Static analysis ii) performen	on tooting		
	Developers would typically use i as	nd ive toot toom !! . 1 !!!	anagement iv) dyr	amic analysis
	of Developers would typically like 1 21	nd iii: toot toom !! and !		
	of Developers would typically like 1 11	Il and is: test toom ::		
	d) Developers would typically use ii a	nd iv; test team i and iii		
	31. Functional system testing is:			
	a) Testing that the system functions w	ith other systems		
1-	testing the end to end functionality	of the system as a whole		
-,	c) resume that the components that co	mprise the system function		
	together			
	<ul> <li>d) testing the system performs function times</li> </ul>	as within specified response		
	times		33 ·	
1 -	32. Which of the following items woul	d not come under Configures	ion Manage 10	
-1	a) Operating systems b) Live da	ta c) Test documenta	ntion d) User requi	
	documents	ay a see decamond	u) Oser requi	rement
-1-	33. Incidents would not be raised again			
•	a) Requirements b) Documents	ntation <u>c) Improvements</u>	s suggested by users	d) Test cases
	34. Maintenance testing is:			
	a) Testing to maintain business advanta	go h) Tradi		
-0-	Testing by users to ensure that the sy	stem meets a husiness need	eleased system that	has been changed
	software has changed	stem meets a business need	d) Updating te	sts when the
-1-	35. Which of the following techniques i	s NOT a black box techniqu	e?	
-1	a) State transition testing b) Sys	ntax testing (LCSAJ	d) Boundary v	value analysis
	06 777	- , , , , , , , , , , , , , , , , , , ,	-, - oundary v	and unalysis
1_	36. What can static analysis NOT find?	·		
-1-	a) Memory leaks b) Unreachable ("de	ead") code c) The use of a	variable before it h	as been defined
	d) Array bound violations			

-1-	37. Which of the follow replay facilities?	ring is likely to benefit most	from the use of test too	ols providing test capture and
. •	- 1 7 / -	Regression testing		d) User acceptance testing
-1	a) The system shall be u	all be less than one second rts of the system shall conta	for the specified design	ı load.
-)	39 In prioritizing what a) Test high risk areas. d) Test whatever is easi	to test, the most important b) Find as many fau est to test.	objective is to: lts as possible. c) C	Obtain good test coverage.
		ised against documentation when expected and actual re- yzed to assist in test proces	Julio Gizza	
	4)	Portability	Maintainability d)	None
0-	42. Identify the correct a)Errors per KLOC	/θ) Ψ F = =	c)Defects per KLOC	d)None
. 1 -	4 11 1 Cta 100 22 2 2	Jiiit testa 2	ation testing	d)Stress testing
- -,	a) Failure b) Clien			n a G . Josigning
-  -	45. When can white-bo a)After SRS creation	x testing be started? b)after installation	c) after programn	ning A)After designing
-1-	46. By whom is unit tes a)Users b)Custor		d)None	ified?
	VANCATAM DASEU 1991-19	-		
- -	48. Identify the term wla)Finding broken code d)None of the above	b)A stage of all project	form alpha testing?  a) Both a and b are co	orrect A)None of the above
-1	a)User's end  b)I  Choose the correct of the correc	Developer's end  option which represents the by Procedure error	ne key objective of in rs c) Design 6	ntegration testing? errors d) none of the above

### ADICHUNCHANAGIRI INSTITUTE OF TECHNOLOGY CHIKKAMAGALURU Department of Computer Science & Engineering

### **Summary Report**

The course "Software Testing" was conducted at CS&E Dept from 25/01/2019 to 29/01/2019.

This course helps the students to understand critical processes of the software development process life cycle. It helps the companies to perform a comprehensive assessment of software and ensure that their product fulfils the client's needs. The testing phases of the software development lifecycle help to identify all errors and bugs of any software to companies before it is implemented. If the software bugs are not solved or fixed before deployment they badly affect the client's business.

### **Course Outcomes**

- 1. Understand and describe the basic concepts of functional (black box) software testing.
- 2. Identify a number of test styles and techniques and assess their usefulness in your context.
- 3. Understand the basic application of techniques used to identify useful ideas for tests.
- 4. Help determine the mission and communicate the status of your testing with the rest of your project team.

5. Understand where key testing concepts apply within the context of unified processes.

Instructor's Signature

HOD's Signature

Secretment of Computer Science and Engg. nunchanagiri Institute of Technology

CHIKMAGALUR - 577102

# ADD-ON Program

2021-22

### ADD on Program On "Deep Learning :AI"





ADD-ON Course On

"DEEP LEARNING:AI"





Organized by,

Department of Computer Science and Enginering. Adichunchanagiri Institute of Technology, Chikmagalur – 577102 Karnataka. India www.aitchikmagalur.ac.in

About the College:

Adichunchanagiri Institute of Technology (AIT) was established in the year 1980 under the auspicious of Adichunchanagiri Shikshana Trust(R) with the blessings of Bhairavaikya Jagadguru Padmabhushana Sri Sri Sri Dr. Balagangadharanatha

Mahaswamiji to provide technical and other professional education in the rural area of Chikmagalur, the land of Coffee. With the blessings of Jagadguru Sri. Sri. Sri Nirmalanandanatha Swamiji, AIT is imparting the quality education in Engineering and Management with ethical and spiritual values. The engineering departments have

recognized as research centers under VTU. The college has well equipped laboratory facilities and highly qualified and experienced faculty. The Institute is providing good training for students to excel in academics as well as in industry requirements and aims towards 100% placements to give a better future for students.

### About the Department:

The Department of Computer Science and Engineering is established in the year 1986. It was earlier affiliated to the Mysore University later to the Kuvempu University and at present, it is affiliated to Visvesvaraya Technological University, Belagavi. The alumni of the department are working in various reputed organizations in India and abroad. The department is accredited twice by National Broad of Accreditation, New Delhi.

The department offers UG, PG Courses with an intake of 120 and 18 respectively and facilitates R&D through VTU recognized research center. The department has received funds from various reputed agencies like AICTE, VGST, KSCST, ISRO, ISTE, etc., for its activities.

### Objectives of the Course:

Competence in technical writing holds great importance in the present era. Technical writing deals with specific knowledge, generally in the sphere of science and technology, and may be used in a wide variety of media: journal papers, thesis, project proposals, and other technical documents. DEEP LEARNING AI is a document typesetting system that is used to produce high quality scientific documents, like articles, books, dissertations, technical reports, etc. Expertise in drafting technical documents is an indispensable skill for all professionals for it helps them to share their knowledge of technical subjects effectively in all domains of society and thus makes them competent in their professional careers

### Resource Person:

Dr. Adarsh M J.

Associate Professor

Dept of CS&E, AIT, Chikkamagaluru

### Convenor:

Dr Pushpa Ravi kumar, Professor and Head, Dept. of CS&E.

### Coordinator:

Mr. S J Prashanth, Asst Professor, Dept. CS&E, AIT, Chikkamagaluru



### | | Jai Sri Gurudev | |



### SRI ADICHUNCHANAGIRI SHIKSHANA TRUST ® ADICHUNCHANAGIRI INSTITUTE OF TECHNOLOGY, CHIKKAMAGALURU

P.B No.91, Adichunchanagiri Extension, Chikkamagaluru-577 102, Karnataka ,India.

Ref: AIT/IQAC/CSE/

/2018-2019

Date: 10/06/2018

### Circular

Department of Computer Science & Engineering is conducting a Certificate Program (Add-on Program) on "Deep Learning: AI [19CS\_AC\_013] from 18-06-2018 to 02-07-2018 All other HOD's instruct the concern department students to attend the program. Following faculty member (Course instructor) is conducting a certificate program at CS&E Department.

### Course Instructor

- Prof. Vivekananda
   Assistant Professor
   Dept. of CS&E
   AIT Chikmagalur
- Prof. S J Prashantha Assistant Professor Dept. of CS&E AIT Chikmagalur

Professor and H.O.D.

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Adichunchanagiri Institute of Technology
CHIKMAGALUR - 577102

Principal Signature

Principal B.E.,M.Tech.,Ph.D

Principal B.E.,M.Tech.,Ph.D Adichunchanagiri Institute of Technology CHIKKAMAGALURU-577102

### ADICHUNCHANAGIRI INSTITUTE OF TECHNOLOGY, CHIKKAMAGALURU DEPARTMENT OF COMPUTER SCIENCE & ENGINEERING

### Add on course - 30 Hours

ADD on Course Name: Deep Learning: AI

Course Code: 19CS\_AC\_013



### Module 1:

10 Hours

10 Hours

Basic Concepts of Machine Learning: Machine Learning Systems ,Supervised Learning , Learning Algorithms Parametric Models ,Cost functions ,Generalization ,Regularization ,Evaluation of a Binary Classifier , Confusion Matrix ,Receiver Operating, Characteristic Curve , Precision Recall Curve.

Module 2:

Artificial Neural Networks: Basic Concepts ,Feed forward Neural Networks ,Single-Layer Perceptron ,Multilayer Perceptron ,ANN Learning Gradient Descent Methods ,Back-propagation Algorithm ,Regularization

Module 3: 10 Hours

Convolutional Neural Networks :Convolution Operation . Convolution in Mathematic and Image Processing Convolution in Neuroscience ,Convolutional Network Architecture . Convolutional Layer . Pooling .. Batch Normalization . Main Concepts Behind CNNs . Local Receptive fields. Parameter Sharing . Popular CNN Architectures .

### **TEXT BOOKS:**

1. Neural Networks and Deep learning: A Text book by Charu C.Aggarrwal 2018

### ADICHUNCHANAGIRI INSTITUTE OF TECHNOLOGY, CHIKKAMAGALURU DEPARTMENT OF COMPUTER SCIENCE & ENGINEERING

ADD on Course Name: Deep Learning: AI

Course Code: 19CS\_AC\_013

Branch: CSE

### Student Enrollment List

SI NO	NAME	USN	SIGNATURE
		4A/14CS012	Aportia S.R
1	APOORVA S R	4AI14CS026	Devel
2	DEEKSHA K N	4AI15C5002	Abtolaty
3	ABHISHEK G	4AI15CS028	Chambra
4	CHANDANA PH	4AJ15CS051	karshik S.D.
5	KOUSHIK S D	4A/15CS064	Nal
6	NIDHI A R	4A/15C5103	S. D. S.
7	SIDDANTH B K	4A/16C5002	adv.
8	ADYA H N	4AI16CS003	NA STATE OF THE ST
9	AGNES SANMATHI D	4A/16CS004	Acte
10	ALFIYA BANU	4AI16CS006	anaba
11	ANANYA K V	4AI16CS007	hould
12	ANUSHA K N	4A/16C5008	And the second
13	ANUVIKA A S		front-gerore
14	ARVIND GIRISH	4AI16CS009	Bazora.
15	ВАВІТНА В	4AI16CS011	Dazzer,
16	BHAGYASHREE H D	4AI16CS012	D. N.
17	BHOOMIKA G S	4AI16CS013	Shostande
18	BHOOMIKA K	4AI16CS014	Bhom
19	BINDUSHREE C .	4AI16CS015	Bhomis
20	BINDUSREE B R	4AI16CS016	Bindustree, R
21	BRUNDA D	4AI16CS017	Bruss
22	CHANDANA H Y	4AI16CS018	- Change
13	CHINMAYEE	4AI16CS019	Cocces
4	CHINTHANA M C	4AI16CS021	chiththanh.
5	CHIRAG M R	4AI16CS022	Chirag ny
6	DEEPAK N R	4AI16CS023	alapako N.Z.
7	DEEPIKA D P	4A/16CS024	Dapiko V.
8	GADDI CHETAN	4AI16CS025	Colon Cons
9	GOURAV B R	4AI16CS026	Gausian
0	HARSHA H K	4AI16CS027	Average
1	JAYASHREE	4AI16CS028	Jagethre
2	JEEVAN A S	4A/16CS029	Jeevan
3	KALPASHREE Y	4AI16CS030	Laghanner
	KARTHIK N L	4AI16CS031	Kathyle NL
	KAVYA S	4AI16CS032	*ayas
	KAVYA S K	4AI16CS033	Yovya s.k
	KAVYASHREE C M	4AI16CS034	Karyashree
	KHALEEL AHAMED	4AI16CS035	Khalell
-	KOWSHIK V	4AI16CS036	Kourshek
	KRUTHIKA G NAYAK	4AI16CS037	Kaullisha fo
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7 1	NAVEEN P PARVATHANENI	4AI16CS047	gange
18	NAYANA K S	4AI16CS048	Mareen.
19	NESARA B R	4AI16CS049	Nove-
50	NISCHITHA K S	4AI16CS051	111100
51	NISHANTH K R	4AI16CS052	(Subject of
52	NISWARTH V SHETTY	4AI16CS053	Wakan
53	P PRADEEP KUMAR	4AI16CS054	D. Land
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66	VUETHA B S	4AI17CS407 4AI17CS409	new
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72	SINCHANA S GOWDA	4AI16CS090	Sinchal
73	SNEHA K	4AI16CS091	Shide
74	SOUMYA H	4AI16CS092	Sounda
75	SOUNDARYA GOGATE T S	4AI16CS093	Samolanya -
76	SOURAB SAKLECHA	4AI16CS094	Squats.
77	SOWMYA M	4AI16CS095	SONTE
78	SPANDANA H P	4AI16CS096	Spandana
79	SPANDANA \$	4AI16CS097	Spandanas.
80	JEANOTIA O II	4AI16CS098	Sperone
81	SF COMMINIA	4AI16CS099	- Spurcha Arr
82	DIVIDITION OF THE TITE	4AI16CS100	a
83	SRUSTI R B S	4AI16CS101	srusti
84	Seminimum	4AI16CS102	Sunawher
85	SUPRITH K .	4AI16CS103	Suporthic
86	SUPRIYA S K	4AI16CS104	Dupinya.
87	VAISHNAVI C O	4AI16C5114	Veushneu

Course Instructor Signature

Professor Sign: Hube D.

Department of Company Science and Engg.

Adichunchanag Bruting of Vechnology

CHIK. ASALUR - 577-02

### ADICHUNCHANAGIRI INSTITUTE OF TECHNOLOGY, CHIKKAMAGALURU DEPARTMENT OF COMPUTER SCIENCE & ENGINEERING

ADD on Course Name: Deep Learning :AI

Course Code: 19CS\_AC\_013

Branch: CSE

Students are identified for ADD on Course Classes based on their enrolment.

ADD on Course classes will be held during 18-06-2018 to 02-07-2018 at CS&E dept from 4-6pm

### **Attendance Report**

SI NO	NAME	USN	. During 18-06-2018 to 02-07-2018						Signature									
NO			-	12	3	4	5	6	7	8	9	10	11	12	13	14	15	
			1	2		1000	P	-	P	P	P	A	P	P	P	P	P	ADDOGNAA SI
1	APOORVA S R	4A/14CS012	P	8	P	P	-	P	1	1	-	-	P	P	P	P	P	Dec Repor KA
2	DEEKSHA K N	4AJ14CS026	A	P	P	P	7	P	P	P	P	P	P	P	P	P	P	abjet
3	ABHISHEK G	4A/15CS002	P	P	P	P	P	P	P	P	P	P	-	-	P	P	P	chero
4 .	CHANDANA P.H	4AI15CS028	P	P	9	P	P	P	P	P	P	P	P	A	P.	P	P	(ROOMES
5	KOUSHIK S D	4AI15CS051	P	P	P	P	P	6	P	P	P	P	A	A		P	P	Midhows
6	NIDHI A R	4AI15CS064	P	P	P	P	P	P	P	P	P	P	A	A	P	P	P	Siduth
7 .	SIDDANTH B K	4AI15CS103	P	P	P	P	P	P	P	A	A	A	1	P	P	-	-	
8	ADYA H N	4AI16CS002	P	P	P	P	P	P	P	P	P	P	P	9	P	P	P	Adyath
9	AGNES SANMATHI D	4AI16CS003	P	P	P	P	P	P	P	A	A	P	P	P	P	P		Agrily Smith D
10	ALFIYA BANU	4AI16CS004	P	P	P	P	A	P	P	P	P	P	P	P	P	P	P	Altria bour
11	ANANYA K V	4AI16CS006	P	A	P	A	P	P	P	P	P	P	P	A	P	P	P	Page 1
12	ANUSHA K N	4AI16CS007	P	P	P	P	P	P	A	A	A	:A	P	P	P	P	P	A saula
13	ANUVIKA A S	4AI16CS008	P	A	A	P	P	P	P	A	P	P	P	P	P	P	P	Brown Lang
14	ARVIND GIRISH	4AI16CS009	P	P	P	P	P	P	P	P	P	P	P	A	A	P	A	Agaruja m
15	ВАВІТНА В	4AI16CS011	P	P	A	A	P	P	P	P	P	P	A	P	P	P	P	Balit
16	BHAGYASHREE H D	4AI16CS012	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	Braggo
17	BHOOMIKA G S	4AI16CS013	P	P	P	P	P	P	P	A	A	A	P	P	P	P	P	Brees
18	BHOOMIKA K	4AI16CS014	P	P	P	P	P	A	A	P	P	P	P	P	P	P	P	Broom
19	BINDUSHREE C	4AI16CS015	P	P	P	p	P	P	P	P	P	A	P	P	P	A	P	Binell
20	BINDUSREE B R	4AI16CS016	P	P	P	P	P	A	P	P	P	P	P	P	P	P	P	Raga
21	BRUNDA D	4AI16CS017	P	P	P	P	P	P	A	A	P	P	P	P	P	P	P	O anthon
22	CHANDANA H Y	4AI16CS018	A	A	A	P	P	P	A	P	P	P	P	P	P	P	P	Belans
23	CHINMAYEE	4Al16CS019	P	P	P	A	P	P	A	P	P	P	P	A	P	P	P	(stans
24	CHINTHANA M C	4AJ16CS021 -	A	A	P	P	P	P	P	P	P	P	A	P	P	P	P	(mint
25	CHIRAG M R	4AJ16C5022	0	D	D	P	P	P	P	P	P	P	P	P	P	P	P	Charant
26	DEEPAK N R	4AI16CS023	P	P	P	P	P	P	P	P	P	P	P	P	A	P	0	Devor
27	DEEPIKA D P	4AI16CS024	D	A	D	P	A	p	P	P	P	0	P	P	A	P	10	
28	GADDI CHETAN	4AI16CS025	P	P	A	P	P	A	P	P	P	P	P	P	P	P	P	Gradas
29	GOURAV B R	4AI16CS026	P	P	A	P	P	P	P	P	P	P	P	P	P	P	P	house
30	HARSHA H K	4AI16CS027	à	P	P	P	P	P	P	P	P	P	D	A	P	P	P	teur
31	JAYASHREE	4AI16CS028	0	A	P	P	P	P	P	P	P	0	P	0	0	P	A	Jack
32	JEEVAN A S	4AI16C5029	0	A	P	P	P	0	P	P	P	P	P	P	P	0	P	Toyon
33	KALPASHREE Y	4AI16CS030	P	P	P	P	P	P	P	P	0	A	P	P	D	P	P	
34	KARTHIK N L	4AI16CS031	P	A	P	P	P	P	P	P	P	0	0	0	P	P	P	radic
35	KAVYAS	4AI16CS032	0	A	P	O	P	P	P	P	P	P	P	0	D	P	0	1
36	KAVYASK	4AI16C5033	P	P	P	0	A	0	P	P	P	P	P	P	-	-	P	kanaya
37	KAVYASHREE C M	4AI16CS034	P	P	0	P	P	0	-	-	+	· ·	-	-	P	P	-	Knya
38	KHALEEL AHAMED	4A/16C5035	P	P	A	P	P	6	A	A	P	P	P	P	P	P	P	Kavya.
	MINLEELANAMED	4A(110C3035	1	1	M	P	IP	1,	P	P	IP	P	P	P	A	P	P	kh_li.

39	KOWSHIK V	4AI16CS036	P	P	P	P	P	P	P	P	P	P	P	A	P	P	P	Kal
10	KRUTHIKA G NAYAK	4AI16CS037	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	Krust.
11	LEANDRA MARIA MENDON	4AI16C5038	A	P	P	P	p	P	P	P	P	A	A	P	P	P	P	Leant
42	MANISHA P BEERAIAH	4AI16CS040	A	P	P	P	P	P	P	P	P	P	P	P	P	P	P	mary
43	MEGHANA D Y	4AI16CS042	P	P	P	P	p	p	P	A	P	p	P	P	P	P	P	Memani
44	MOHAMMED NIHAL KHAN	4AI16CS043	A	P	P	P	P	P	P	P	P	P	P	P	P	A	P	wender
45	MOUNAJ	4AI16CS044	P	P	P	P	P	P	P	A	P	P	P	A	P	P	P	MOREDIEN
46	NAMITHA M TAPSE	4AI16CS046	P	P	P	P	p	P	P	P	P	P	P	A	P	P	P	Morrisham
47	NAVEEN P PARVATHANENI	4AI16CS047	P	P	P	P	P	P	P	P	P	P	A	P	P	P	P	Naveen
48	NAYANA KS	4AI16CS048	P	A	P	P	P	P	P	P	P	P	P	P	P	P	P	1400
49	NESARA B R	4AI16CS049	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	nesara
50	NISCHITHA K S	4AI16CS051	A	P	P	P	P	P	P	P	P	P	P	P	P	P	P	News
51	NISHANTH K R	4AI16CS052	P	P	P	A	P	P	A	P	P	P	P	P	P	P	P	Nishaust
52	NISWARTH V SHETTY	4AI16CS053	P	P	P	P	P	P	P	P	P	A	P	P	P	P	P	Deg (10)
53	P PRADEEP KUMAR	4AI16CS054	A	P	P	P	P	P	P	P	P	P	P	P	P	P	P	Proper
54	POOJA B R	4AI16CS055	P	P	-	P	A	P	P	P	P	P	P	P	P	P	P	HEO JOY
55	POOJA B S	4AI16CS056	A	P	P	P	P	P	P	A	P	P	P	P	P	P	P	Host
56		4AI16CS057	P	P	P	P	P	P	P	P	P	P	A	P	P	P	P	<b>P</b>
57	PODJAS	4AI16CS058	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	follow.
58		4AI16CS059	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	Keeple
59		4AI16CS062	P	P	P	P	P	P	A	P	P	P	P	P	P	P	P-	-REDY
60		4AI16CS063	P	P	P	P	P	P	P	P	P	P	P	A	P	P	P	Kenthi
61		4A)16CS064	A	A	P	P	P	P	P	P	P	P	A	P	P	P	P	(Bhr
62		4AI16CS127	P	0	p	A	P	P	P	P	P	P	P	P	P	P	P	POOTA .
63		4AI16CS130	P	P	P	A	P	P	P	P	P	A	P	A	P	P	P	Ale
64		4AI17CS400	P	A	P	P	P	P	P	P	P	P	A	P	P	P	P	2
65		4AI17CS407	P	P	A	P	P	P	P	P	P	P	P	P	P	A	P	40
66		4AI17CS409	P	P	P	P	P	A	P	P	P	P	P	P	P	P	P	1/20
67	SHREYA B R	4AI16CS085	P	P	P	P	P	P	P	P	P	P	P	P	A	P	P	200
63	The state of the s	4AI16CS086	P	P	A	A	P	P	P	P	P	P	R	P	P	P	P	Dik
69		4AI16CS087	D	P		P	P	P	P	P	P	P	6	P	A	P	P	Shigh
70	Similaritations	4AI16C5088	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	sidden
7	0.000.00	4AJ16CS089	P	P	P	P	P	P	P	P	P	A	P	P	P	P	P	Sincha
7		4AI16C5090	P	P	A	P	-	P	P	P	P	P	P	P	P	P	9	Sishuh
7.	3 SNEHA K	4AI16CS091	A	A	P	P	P	P	P	P	P	P	P	9	P	P	P	Sneha
7	4 SOUMYA H	4AI16CS092	P	P	P	-	P	D	P	Ď	-	P	P	P	P	P	P	aoch
7.	5 SOUNDARYA GOGATE T S	4AI16CS093	P	_		P	P	A	A	P	P	P	P	P	P	P	P	3
7	6 SOURAB SAKLECHA	4AI16CS094	P	P	-	-	P	6	P	P	P	P	P	P	P	P	P	Source
7	7 SOWMYA M	4AI16CS095	P	-		P	P	8	P	P	P	P	P	P	P	B	p	Standay
7	8 SPANDANA H P	4AI16CS096	P	15	-	P	P	P	P	P	P	A	A	P	P	P	P	-
7	9 SPANDANA S	4AJ16CS097	F	- 1	-	-	P	P	P	P	P	9	P	P	P	P	P	Some
8	0 SPARSHA B R	4AI16CS098	F	-	P	-	16	P	P	P	-	6	P	P	P	P	P	503
8	1 SPOORTHI A N	4AI16CS099	P	-11	P	P	-	P	6	F	+-	P	P	U	P	P	p	Ryce
8	2 SRISTI BAGAMANE	4AI16CS100	P			-	11.	P	P	P	-	P	A	P	P	P	P	PULS.
8	3 SRUSTI R B S	4AI16CS101	P	P		-	P	11-	P	P	-	P	P	P	P	P	P	Show y
8	4 SUMANTHA M K	4AI16CS102	P	1	-	-	-	,	A	1/4	P	P	P	10	P	P	P	Sumant
8	5 SUPRITH K	4AI16C5103	P	P	1,	P	P	P	P	P	14	P	P	P	P	P	P	Supr
8	6 SUPRIYA S K	4AI16CS104	P	P	-	P	P	P	P	A	A	A	A	P	P	P	P	8
8	7 VAISHNAVI CO	4AI16CS114	P	A	A	P	P	P	P	P	P	P	P	A	A	P	P	Vaish

Course Instructor Signature

HOD Signature

Professor and H.O.D.

Department of Computer Science and Erroy.
Adichunchanagiri Institute of Technology
CHIKMAGALUR - 577102

### ADICHUNCHANAGIRI INSTITUTE OF TECHNOLOGY, CHIKKAMAGALURU DEPARTMENT OF COMPUTER SCIENCE & ENGINEERING

ADD ON COURSE NAME: DEEP LEARNING: AI

COURSE CODE: 19CS\_AC\_013 ASSESSMENT QUESTIONS

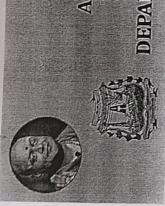
### LIST OF TOPPERS

SLNo	Name of the Student	USN	Marks Scored
1	Vaishnavi C O	4AI16CS114	50
2	Sumantha M K	4AI16CS102	49
3	Sristi Bagamane	4AI16CS100	48

Signature of the H.O.D

Professor and H.O.D.

Department of Computer Science and Engg. Adichunchanagiri Institute of Technology CHIXMAGALUR - 577 102



||Jai Sri Gurudev||

Sri Adichunchanagiri Shikshana Trust (R)

ADICHUNCHANAGIRI INSTITTUTEOF TECHNOLOGY

CHIKKAMAGALURU - 577 102

DEPAIRTMENT OF COMPUTIER SCHENCE AND ENGINEERING



## Certificate of Participation

This is to certify that POOJA B R has successfully completed the add on course on "Deep Learning :AI" from 18-06-2018 to 02-07-2018 organized by Department of Computer Science and Engineering.

Prof. S J Prashantha Staff co-ordinator

Prof. Vivekananda Staff co-ordinator

Professor and H.O.D.
Depalbrektishparkavikainae and Engalichunchanggiologitute of TechnochikMAGALUR - 577102

### ADICHUNCHANAGIRI INSTITUTE OF TECHNOLOGY, CHIKKAMAGALURU DEPARTMENT OF COMPUTER SCIENCE & ENGINEERING

ADD ON COURSE NAME: DEEP LEARNING: AI

COURSE CODE: 19CS\_AC\_013

ASSESSMENT QUESTIONS



Max Marks: 50

Na	ame of the Student: Apporva S. R
US	SN: HAIIHCSOI2
	Which of the following is a subset of machine learning?  A. Numpy B. SciPy . Deep Learning D. All of the above
~	How many layers Deep learning algorithms are constructed?  A. 2
1/	The first layer is called the?  C. hidden layer D. None of the above
	RNNs stands for?  A. Receives neural networks  B. Report neural networks  C. Recording neural networks
X A	Which of the following is/are Common uses of RNNs?  A. Businesses Help securities traders to generate analytic reports  Detect fraudulent credit-card transaction  C. Provide a caption for images  D. All of the above
./	NN is mostly used when there is an?  structured data D. unstructured data C. Both A and B D. None of the above
X A.	A Shallow neural network  Shallow neural network  Feed-forward neural networks  D. Recurrent neural networks

8. Deep learning algorithms are more accurate than machine learning algorithm in image classification
A. 33% B. 37% C. 40% D. 41%
9. In which of the following applications can we use deep learning to solve the problem?
A. Protein structure prediction  B. Prediction of chemical reactions  C. Detection of exotic particles  D. All of the above
10. The number of nodes in the input layer is 10 and the hidden layer is 5. The maximum number of connections from the input layer to the hidden layer are
A. 50 B. less than 50 Q. more than 50 D. It is an arbitrary value
11. The input image has been converted into a matrix of size 28 X 28 and a kernel/filter of size 7 X 7 with a stride of 1. What will be the size of the convoluted matrix?
A. 20x20 D. 21x21 C. 22x22 D. 25x25
12. In a simple MLP model with 8 neurons in the input layer, 5 neurons in the hidden layer and 1 neuron in the output layer. What is the size of the weight matrices between hidden output layer and input hidden layer?
A. [1 X 5], [5 X 8] P. [5 X 1], [8 X 5] C. [8 X 5], [5 X 1] D. [8 X 5], [1 X 5]
13. Which of the following functions can be used as an activation function in the output layer if we wish to predict the probabilities of n classes (p1, p2pk) such that sum of p over all n equals to 1?
A. Softmax B. ReLu C. Sigmoid D. Tanh
14. Assume a simple MLP model with 3 neurons and inputs= 1,2,3. The weights to the input neurons are 4.5 and 6 respectively. Assume the activation function is a linear constant value of 3. What will be the output?
A. 32 B. 64 €. 96 D. 128
15. Sentiment analysis using Deep Learning is a many-to one prediction task.
A. True B. False C. Can be true and false D. can not say
16. In CNN, having max pooling always decrease the parameters?
A. True B. False C. Can be true and false D. cannot say
17. When an experienced deep learning engineer works on a new problem, they can usually use insight from previous problems to train a good model on the first try, without needing to iterate multiple times through different models.?
True B. False

18. Which of the factors affect the performance of learner system does not include?
a) Representation scheme used b) Training scenario
c) Type of feedback Good data structures
19. Different learning methods does not include?
a) Memorization b) Analogy c) Deduction d) Introduction
20. In language understanding, the levels of knowledge that does not include?
a) Phonological b) Syntactic Empirical d) Logical
21. A model of language consists of the categories which does not include?
a) Language units b) Role structure of units System constraints d) Structural units
22. Among the following which is not a horn clause?
a) p $\longrightarrow \emptyset$ p V q c) p $\rightarrow$ q d) p $\rightarrow \emptyset$ q
23. Type of matrix decomposition model is
A. predictive model D. descriptive model C.logical model D.None
24. PCA is
C. feature extraction D. None of these
25. Supervised learning and unsupervised clustering both require which is correct according to the statement.
input attribute B. hidden attribute C.output attribute D.categorical attribute
26. Following are the types of supervised learning
A. Regression B. classification C. subgroup discovery D. All of above
27. A feature F1 can take certain value: A, B, C, D, E, & F and represents grade of students from a college. Here feature type is
A. Ordinal B. nominal C. categorical D. Boolean
28. Following is powerful distance metrics used by Geometric model
A. Manhattan distance B. Euclidean distance All of above D. None of above
29. The output of training process in machine learning is
A. Machine learning algorithm.   Machine learning model C. Null D. accuracy

30. Which of the following is a good test dataset characteristic?	
is representative of the dataset as a whole	
B. large enough to yield meaningful results	
C. All of above	
D. None of above	
31. Which of the following techniques would perform better for reducing dimensions of a data set?	
A. removing columns which have high variance in data	
R. removing columns which have too many missing value	
C. removing columns with dissimilar data trends	
D. None of the above	
32. You are given reviews of few Netflix series marked as positive, negative and neutral. Classifying re	view
a new Netflix series is an example of	
A unsupervised learning B, semi supervised learning	
A unsupervised learning  B. semi supervised learning  D. reinforcement learning	
33. Like the probabilistic view, the view allows us to associate a probability of membership v	4.4
each classification	vith
A. Deductive B. exampler C. classical D. inductive	
34. Database query is used to uncover this type of knowledge.	
Hidden B. shallow C. Deep D. multidimensional	
35. Data used to build a data mining model.	
A. Training data B. hidden data W. test data D. validation data	
36. If machine learning model output does to be sold at a D. validation data	
36. If machine learning model output doesn't involves target variable then that model is	
A. predictive model    M. descriptive model    C. reinforcement learning    D. all of the above	
D. descriptive model C. reinforcement learning D. all of the	
37. In the example of predicting number of babies based on stork's population, Number of babies is  A. feature  B. observation	
number of babies based on stork's population, Number of balance	
- marripule	
38. Following are the descriptive models	
A. Classification B. clustering C. association	
Both Land 2	
39. What does dimensionality reduction reduce?	
W. Collinearity P. start .	
D. performance	

40. Which of the following is the best machine learning method?
A. Accuracy B. scalable C. fast D. All of above
41. In multiclass classification number of classes must be
A. Equals to two B. less than two S. greater than two D. None
42. Which of the following can only be used when training data are linearly separable?
A. linear logistic regression C. linear soft margin svm D. parzen windows
43. Impact of high variance on the training set?
A. underfitting
44. The effectiveness of an SVM depends upon
A. kernel parameters B. selection of kernel C. soft margin parameter D. All of the above
45. Feature can be used as a
M. predictor B. binary split C. All of above D. None of above
46. Which of the following evaluation metrics can not be applied in case of logistic regression output to compare with target?
A. Accuracy B. auc-roc C. logloss
47. A measurable property or parameter of the data-set is
A. training data B. test data . feature D. validation data
48. Support Vector Machine is
49. Imagine a Newly-Born starts to learn walking. It will try to find a suitable policy to learn walking after repeated falling and getting up. Specify what type of machine learning is best suited?
A. Regression B. means algorithm . reinforcement learning D. None
50. Different learning methods does not include?
A. Deduction B. memorization C. analogy . Introduction

### ADICHUNCHANAGIRI INSTITUE OF TECHNOLOGY, CHIKKAMAGALURU-577102. DEPARTMENT OF COPMUTER SCIENCE & ENGINEERING

### Add-On Course on "Deep Learning :AI"

### OVER ALL Add-On Course PARTICIPANTS FEEDBACK

Sl.No	DESCRIPTION	EXCELLENT	GOOD	POOR
1	How would you rate the presenter's knowledge on the concept?	/		
2	How would you rate the concepts and Information provided by the Presenter?	V		
3	What was your overall impression of the session?			1
4	Remarks	Got se after sess	ome Kno altending ion,	w ledge the

Signature of the Participants

### ADICHUNCHANAGIRI INSTITUTE OF TECHNOLOGY CHIKKAMAGALURU **Department of Computer Science & Engineering**

### **Summary Report**

The course "Deep Learning:AI" was conducted at CS&E Dept from 18/06/2018 to 02/07/2018.

The main objective of this course is to make students comfortable with tools and techniques required in handling large amounts of datasets. They will also uncover various deep learning methods in NLP, Neural Networks etc. Several libraries and datasets publicly available will be used to illustrate the application of these algorithms. This will help students in developing skills required to gain experience of doing independent research and study.

### Course Outcomes

Students are able to

- Understand the informed and uninformed problem types and apply search strategies to solve them.
- Apply difficult real life problems in a state space representation so as to solve them using AI techniques like searching and game playing.
- Design and evaluate intelligent expert models for perception and prediction from intelligent environment.
- Formulate valid solutions for problems involving uncertain inputs or outcomes by using decision making techniques.
- Demonstrate and enrich knowledge to select and apply AI tools to synthesize information and develop models within constraints of application area.

 Examine the issues involved in knowledge bases, reasoning systems and planning

Instructor's Signature

HOD's Signature.

Professor and H.O.D Department of Computer Science and Adichunchanagiri Institute of Technology CHIKMAGALUR - 577102

	Advance In N	Machine Learning			
VIII "A" SECTION					
SL.NO	USN	NAME			
1	4AI15CS051	KOUSHIK S D			
2	4AI15CS103	SIDDANTH BK			
3	4AI16CS008	ANUVIKA A S			
4	4AI16CS011	BABITHA B			
5	4AI16CS012	BHAGYASHREE H D ·			
6	4AI16CS021	CHINTHANA M C			
7	4AI16CS023	DEEPAK N R			
8	4AI16CS025	GADDI CHETAN			
9	4AI16CS027	HARSHA H K			
10	4AI16CS028	JAYASHREE H M			
11	4AI16CS030	KALPASHREE Y			
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### CAPULUS TECHNOLOGIES PRIVATE LIMITED

Email: contact@capulustech.com Website: www.capulustech.com

CIN U72900KA2017PTC103203 Ph: +91 8262 - 298089

Recognized Under #startupindia

Date: 07 / 03 / 2020

To, The Head of Department, Computer Science & Engineering, AIT, Chikmagalur

Sub: Feedback on the Add-On course we conducted for the students of CS&E

Respected Madam,

With reference to the above subject, we are happy to have conducted the add-on course in the Department of Computer Science & Engineering on Advances in Android Application Development and Machine Learning.

First thing I have to say, the commitment of the students towards the add-on course was wonderful, that too in their vacation period. We could clearly see the urge in the students to learn new technologies and practical applications of those technologies. This helped us to conduct the course in a proactive manner. The attendance of the students throughout the course was overwhelming which showed their unconditional interest in the proceedings. It was a nice experience for us too, we always feel it interesting to communicate with the students with an urge to learn.

I would like to thank you ma'am on behalf of Capulus Technologies for the opportunity and support provided to us during the course. I would also like to thank the co-ordinators of the course Dr. Taranath N.L, Associate Professor, CS&E and Mr. Darshan L.M, Assistant Professor, CS&E for their support. We hope the add-on course was useful for the students and has achieved its intended outcome.

Yours' Faithfully Nith= 16

(Nithin Kamath)

**Executive Director** 

Capulus Technologies Private Limited

About Capulus Technologies

Capulus Technologies is a Private Limited Software Firm helping companies, industries, institutions and government manage complexities in their operations by providing them smart technology solutions. Since founding, Capulus Technologies has always believed in the highest level of integrity, followed a people-oriented approach, and given back to the society when the principle of operations by providing them smart technology solutions. Since founding, Capulus Technologies has always believed in the highest level of integrity, followed a people-oriented approach, and given back to the society whenever possible. Capulus Technologies will continue to follow the principle of "client first" in providing reliable and highly effective services. Our practical knowledge and rich experiences allow us to provide comprehensive I.T Capulus Technologies Private Limited is the company which developed the official and of Karnatala State Police which has been implemented state-Capulus Technologies Private Limited is the company which developed the official app of Karnataka State Police which has been implemented state-

wide across National A.

The Company has wide experience in developing software applications according to the needs of the clients. The team has good domain expertise and have provided software solutions for various Government Departments as well as Private Companies. The company is recognized by Central Government under StartUp India initiative and has received a Certificate of Recognition Government under StartUp India initiative and has received a Certificate of Recognition.

### **Toppers in Add - On Course Test**

# Advances in Android Application Development:

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# Advances in machine Learning:

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Signature of the HOD

Professor and H.O.D.

Department of Computer Science and Eng Adichunchanagiri Institute of Technolog CHIKMAGALUR - 577 102

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### Department of CS & E, AIT, Chikkamagaluru Add on Course Test Advances in MACHINE LEARNING 1. In Machine Learning if Answers' and 'Data'are given as input, what will we get as output? b. Machine Learning Rules d. Answers 2. What is the process in which weinstruct a computer (i.e. data is for walking, data is for runningetc.,) a. Categorizing the Data Labelling the Data c. Programming the Data d. Learning the Data 3. What is a Dense in keras? a. A single neuron **b**. A layer of connected neurons c. A layer of disconnected neurons d. Mass over Volume What does a Loss function do? a. Figures out if you win or lose b. Generates a guess c. Decides to stop training a neural network d. Measures how good the current guess is 5. What does the optimizer do? Figures out how to efficiently compile your code b. Measures how good the current guess is c. Generates a new and improved guess d. Decides to stop training a neural network 6. What is Convergence? a. The unknown word in the ML class The process of getting very close to the correct answer c. A dramatic increase in loss d. A programming API for AI What does model.fit do? a. It makes a model fit available memory b. It trains the neural network to fit one set of values to another c. It determines if your activity is good for your body d. It optimizes an existing model 8. What do the Fashion MNIST Images look like?

# a. 100x100 Color

b. 28x28 3d

c. 28x28 Color

d. 28x28 Greyscale

9. Why are there 10 output neurons while using MNIST data set?

a. Purely arbitrary

b. There are 10 different labels

g. To make it classify 10x faster

d. To make it train 10x faster

Department of CS & E, AIT, Chikkamagaluru 'sob ula Saob tadW .01 Add on Course Test Advances in MACHINE IXI smutar it, x sular or a. s. d. It returns the negative of x 11. Why do you split data into training and test sets? lachine Learning 7. To test a network with previously unseen data b. To train a network with previously unseen data which weinstru c. To make training quicker ni is the process (i.e. data is for walking, data is for runningetc.,) d. To make testing quicker 12. What method gets called when an epoch finish? Categorizing the Data a. \_on\_epoch\_finished() Labelling the Data b. on\_epoch end() c. On\_training\_complete() A White is a Dense in heros? d. on\_end() 13. What parameter do you set in your fit-function to use callbacks? a. callback=[] b., oncallback=[] c. callbacks=[] d. oncallbacks=[] 14. What is a Convolution? a. A technique to make images smaller D A technique to filter out unwanted images c. A technique to isolate features in images d. A technique to make images bigger 15. What is a Pooling? a. A technique to make images sharper b. A technique to isolate features in images A technique to reduce the information in an image while maintaining features d. A technique to combine picture 16. After max pooling a 26x26 image with a 2x2 filter, how big will the output be? a. 28x28 b. 26x26 c. 56x56 d. 13x13 17. Using Image Generator, how do you label images? a. It's based on the file name b. It's based on the directory the image is contained in c. You have to manually do it TensorFlow figures it out from the contents 18. What method on the Image Generator is used to normalize the image? a. normalize\_image= V. normalize= D c. Rescale image= d. rescale= 19. When we specify the input\_shape to be (300, 300, 3), what does that mean? a. There will be 300 images, each size 300, loaded in batches of 3 Every Image will be 300x300 pixels, and there should be 3 Convolutional Layers c. Every Image will be 300x300 pixels, with 3 bytes to define color d. There will be 300 horses and 300 humans, loaded in batches of 3

20. If your training data is close to 1.000 accuracy, but your validation data isn't, what's the risk here?  A. You're overfitting on your training data  b. You're underfitting on your validation data  c. No risk, that's a great result  d. You're overfitting on your validation data  21. What does flow_from_directory give you on the ImageGenerator?  A. The ability to easily load images for training  b. The ability to pick the size of training images  c. The ability to automatically label images based on their directory name  d. All of the above  22. Why is the validation accuracy a better indicator of model performance than training accuracy?  a. It isn't, they're equally valuable  b. There's no relationship between them  The validation accuracy is based on images that the model hasn't been trained with, and thus a better indicator of how the model will perform with new images.
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indicator of how the model will perform with new images.  d. The validation dataset is smaller, and thus less accurate at measuring accuracy, so its performance isn't
as important
23. If my training data only has people facing left, but I want to classify people facing right, how would I
23. If my training data only has people facing left, but I want
avoid overfitting?
a. Use the 'flip_vertical' parameter around the Y axis
b. Use the 'flip' parameter
c. Use the 'horizontal_flip' parameter
d. Use the 'flip' parameter and set 'horizontal
24. When training with augmentation, you noticed that the training is little slower. Why?
24. When training with augmentation, you need to be a second takes excles
d. Because the training is making more mistake
d. Because the than 9
25. When using Image Aug.
data on-disk.?  A. It gets overwritten, so be sure to make a backup  a. It gets overwritten, so be sure to make a backup
a. It gets overwritten, so be sure to make a backup  b. A copy is made and the augmentation is done on the copy  b. A copy is made and the augmentation is done in-memory
b. A copy is made and the augmentation of the
c. Nothing, all augments
d. It gets deleted
d. It gets deleted  Name of the Student: VARUN.A.5  USN: 4AII6CS 117
Name of the Students Ville
Marks Awarded:

This is to certify that Mr./Ms.



Sri Adichunchanagiri Shikshana Trust ®

||Jai Sri Gurudev||

# ADICHUNCHANAGIRI INSTITUTE OF TECHNOLOGY CHIKKAMAGALURU-577102







of 8th Semester has participated and qualified in the add-on Course on "Advances in Machine Learning organized by Department of Computer Science & Engineering, AIT, Chikkamagaluru during 27th January to 8th February 2020 in association with Capulus Technologies Private Limited

Chikkamagaluru.

Capulus Technologies, **Executive Director** Chikkamagaluru

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HOD, Dept. of CS&E AIT,Chikkamagluru

> AIT, Chikkamagaluru Principal

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||Jai Sri Gurudev||

Sri Adichunchanagiri Shikshana Trust ®

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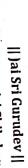
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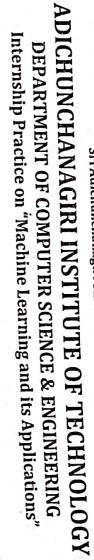
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-	12	4AI16CS089	SINCHANA S B
	13	4AI16CS090	SINCHANA S GOWDA
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	22	4AI16CS113	VAISHNAVI A R
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	26	4AI16CS125	YASHASWINI C
_	27	4AI17CS402	DEEPA J M
	28	4AI17CS408	SHREELAKSHMI M

### CAPULUS TECHNOLOGIES PRIVATE LIMITED

Email: contact@capulustech.com Website: www.capulustech.com

CIN U72900KA2017PTC103203 Ph: +91 8262 - 298089

Recognized Under #startupindia

Date: 07 / 03 / 2020

To, The Head of Department, Computer Science & Engineering, AIT, Chikmagalur

Sub: Feedback on the Add-On course we conducted for the students of CS&E

Respected Madam,

With reference to the above subject, we are happy to have conducted the add-on course in the Department of Computer Science & Engineering on Advances in Android Application Development and Machine Learning.

First thing I have to say, the commitment of the students towards the add-on course was wonderful, that too in their vacation period. We could clearly see the urge in the students to learn new technologies and practical applications of those technologies. This helped us to conduct the course in a proactive manner. The attendance of the students throughout the course was overwhelming which showed their unconditional interest in the proceedings. It was a nice experience for us too, we always feel it interesting to communicate with the students with an urge to learn.

I would like to thank you ma'am on behalf of Capulus Technologies for the opportunity and support provided to us during the course. I would also like to thank the co-ordinators of the course Dr. Taranath N.L, Associate Professor, CS&E and Mr. Darshan L.M, Assistant Professor, CS&E for their support. We hope the add-on course was useful for the students and has achieved its intended outcome.

Yours' Faithfully Nith= 16

(Nithin Kamath)

**Executive Director** 

Capulus Technologies Private Limited

About Capulus Technologies

Capulus Technologies is a Private Limited Software Firm helping companies, industries, institutions and government manage complexities in their operations by providing them smart technology solutions. Since founding, Capulus Technologies has always believed in the highest level of integrity, followed a people-oriented approach, and given back to the society when the principle of operations by providing them smart technology solutions. Since founding, Capulus Technologies has always believed in the highest level of integrity, followed a people-oriented approach, and given back to the society whenever possible. Capulus Technologies will continue to follow the principle of "client first" in providing reliable and highly effective services. Our practical knowledge and rich experiences allow us to provide comprehensive I.T Capulus Technologies Private Limited is the company which developed the official and of Karnatala State Police which has been implemented state-Capulus Technologies Private Limited is the company which developed the official app of Karnataka State Police which has been implemented state-

wide across National A.

The Company has wide experience in developing software applications according to the needs of the clients. The team has good domain expertise and have provided software solutions for various Government Departments as well as Private Companies. The company is recognized by Central Government under StartUp India initiative and has received a Certificate of Recognition Government under StartUp India initiative and has received a Certificate of Recognition.

### **Toppers in Add - On Course Test**

# Advances in Android Application Development:

		USN	MARKS OBTAINED
Sl.No	Name	4A14CCS053	22
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# Advances in machine Learning:

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Sl.No	Karthik N L	4AI16CS031	21	

Signature of the HOD

Professor and H.O.D.

Department of Computer Science and Eng Adichunchanagiri Institute of Technolog CHIKMAGALUR - 577 102

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VIII "B" SECTION								
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1	4AI16CS039	MADHUMITHA K M	Madhur					
2	4AI16CS070	ROJA K S	John N-					
3	4AI16CS072	SADVI N B	Character					
4	4AI16CS073	SAHANA DESAI	Saw Dec					
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### Department of CS & E, AIT, Chikkamagaluru Add on Course Test Advances in MACHINE LEARNING 1. In Machine Learning if Answers' and 'Data'are given as input, what will we get as output? b. Machine Learning Rules d. Answers 2. What is the process in which weinstruct a computer (i.e. data is for walking, data is for runningetc.,) a. Categorizing the Data Labelling the Data c. Programming the Data d. Learning the Data 3. What is a Dense in keras? a. A single neuron **b**. A layer of connected neurons c. A layer of disconnected neurons d. Mass over Volume What does a Loss function do? a. Figures out if you win or lose b. Generates a guess c. Decides to stop training a neural network d. Measures how good the current guess is 5. What does the optimizer do? Figures out how to efficiently compile your code b. Measures how good the current guess is c. Generates a new and improved guess d. Decides to stop training a neural network 6. What is Convergence? a. The unknown word in the ML class The process of getting very close to the correct answer c. A dramatic increase in loss d. A programming API for AI What does model.fit do? a. It makes a model fit available memory b. It trains the neural network to fit one set of values to another c. It determines if your activity is good for your body d. It optimizes an existing model 8. What do the Fashion MNIST Images look like?

# a. 100x100 Color

b. 28x28 3d

c. 28x28 Color

d. 28x28 Greyscale

9. Why are there 10 output neurons while using MNIST data set?

a. Purely arbitrary

b. There are 10 different labels

g. To make it classify 10x faster

d. To make it train 10x faster

Department of CS & E, AIT, Chikkamagaluru 'sob ula Saob tadW .01 Add on Course Test Advances in MACHINE IXI smutar it, x sular or a. s. d. It returns the negative of x 11. Why do you split data into training and test sets? lachine Learning 7. To test a network with previously unseen data b. To train a network with previously unseen data which weinstru c. To make training quicker ni is the process (i.e. data is for walking, data is for runningetc.,) d. To make testing quicker 12. What method gets called when an epoch finish? Categorizing the Data a. \_on\_epoch\_finished() Labelling the Data b. on\_epoch end() c. On\_training\_complete() A White is a Dense in heros? d. on\_end() 13. What parameter do you set in your fit-function to use callbacks? a. callback=[] b., oncallback=[] c. callbacks=[] d. oncallbacks=[] 14. What is a Convolution? a. A technique to make images smaller D A technique to filter out unwanted images c. A technique to isolate features in images d. A technique to make images bigger 15. What is a Pooling? a. A technique to make images sharper b. A technique to isolate features in images A technique to reduce the information in an image while maintaining features d. A technique to combine picture 16. After max pooling a 26x26 image with a 2x2 filter, how big will the output be? a. 28x28 b. 26x26 c. 56x56 d. 13x13 17. Using Image Generator, how do you label images? a. It's based on the file name b. It's based on the directory the image is contained in c. You have to manually do it TensorFlow figures it out from the contents 18. What method on the Image Generator is used to normalize the image? a. normalize\_image= V. normalize= D c. Rescale image= d. rescale= 19. When we specify the input\_shape to be (300, 300, 3), what does that mean? a. There will be 300 images, each size 300, loaded in batches of 3 Every Image will be 300x300 pixels, and there should be 3 Convolutional Layers c. Every Image will be 300x300 pixels, with 3 bytes to define color d. There will be 300 horses and 300 humans, loaded in batches of 3

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,	raining data is close to 1.000 accuracy, but your validation data isn't, what's the risk here?
a. You'l	re overfitting on your training data
	re underfitting on your validation data
•	isk, that's a great result
d. You'	re overfitting on your validation data
21 What do	oes flow_from_directory give you on the ImageGenerator?
✓ The	ability to easily load images for training
h The	ability to pick the size of training images
O c. The	ability to automatically label images based on their directory name
a. All	of the above
22. Why is t	the validation accuracy a better indicator of model performance than training accuracy? on't, they're equally valuable
1 001	and an arelationship hotograph them
1 · c/ The	e validation accuracy is based on images that the model hasn't been trained with, and thus a better
indi	icator of how the model will perform with new images.  e validation dataset is smaller, and thus less accurate at measuring accuracy, so its performance isn't
	mportant
	raining data only has people facing left, but I want to classify people facing right, how would I
23. If my to	raining data only has people facing felt, but I was
avoid o	verfitting?
a. Use	e the 'flip_vertical' parameter around the Y axis
b. Use	e the 'flip' parameter
c. Use	e the 'horizontal_flip' parameter
d. Use	e the 'flip' parameter and set 'horizontal
	training with augmentation, you noticed that the training is little slower. Why?
24. When 1	training with augmentation, you need
d. Be	cause the training is making more mistake
	using Image Augmentation with the ImageDataGenerator, what happens to your raw image
25. When	using Image Aug
data oi	n-disk.?  gets overwritten, so be sure to make a backup  i made and the augmentation is done on the copy
Va. It s	gets overwritten, so be sure to make a buckup  gets overwritten, so be sure to make a buckup  copy is made and the augmentation is done on the copy  copy is made and the augmentation is done in-memory
<b>b</b> . A	copy is made and the augmentation of thing, all augmentation is done in-memory
c. No	othing, all augments
d. It	gets deleted
	of the Student: VARUN. A. S  USN: 4AI16CS 117
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This is to certify that Mr./Ms.



Sri Adichunchanagiri Shikshana Trust ®

||Jai Sri Gurudev||

# ADICHUNCHANAGIRI INSTITUTE OF TECHNOLOGY CHIKKAMAGALURU-577102







of 8th Semester has participated and qualified in the add-on Course on "Advances in Machine Learning organized by Department of Computer Science & Engineering, AIT, Chikkamagaluru during 27th January to 8th February 2020 in association with Capulus Technologies Private Limited

Chikkamagaluru.

Capulus Technologies, **Executive Director** Chikkamagaluru

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HOD, Dept. of CS&E AIT,Chikkamagluru

> AIT, Chikkamagaluru Principal

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||Jai Sri Gurudev||

Sri Adichunchanagiri Shikshana Trust ®

# ADICHUNCHANAGIRI INSTITUTE OF TECHNOLOGY CHIKKAMAGALURU-577102







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organized by Department of Computer Science & Engineering, AIT, Chikkamagaluru during 27th January to 8th February 2020 in association with Capulus Technologies Private Limited,

Chikkamagaluru

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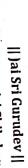
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HOD, Dept. of CS&E AIT,Chikkamagluru

AIT, Chikkamagaluru Principal

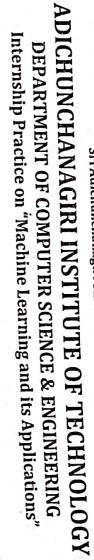
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A: Excellent						. How was	Particulars	
B: Very Good	Comments and Suggestions:	Generally, how was the whole experience at the meeting.	How were the Different sessions?	Was the content of Presentation relevant and current?	How were the Resource Persons?	How was the overall organization of the Internship?	rs	
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# ADD-ON Program

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