

(Approved by AICTE, New Delhi, Affiliated to Anna University, Chennai)
UG - CSE, EEE & MECH Programs Accredited by NBA, New Delhi.
(An ISO 9001:2015 Certified Institution)
TRICHY - PUDUKKOTTAI ROAD, TIRUCHIRAPPALLI - 620 007.
Email: principalengg@miet.edu, contact@miet.edu
Website: - www.miet.edu



Ph: 0431 - 2660 303

1.2.2 Number of Add on /Certificate programs offered during the last five years (10)

	2017-2018	
Sl. No	Name of Add on /Certificate programs offered	Pg.No
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	Circular	3
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Ph: 0431 - 2660 303

Date: 01.06.2017

To

The Principal

M.I.E.T Engineering College,

Trichy - 620007

Respected Madam,

Sub: Permission to conduct the certificate program - Reg...

We have planned to conduct the certificate program for our third year CSE students from 12-6-17 to 17-6-17.

Name of the Certificate Program	Course Coordinator
Basic Concepts of Deep Learning	Mrs.S.Shanmuga Priya., AP/CSE and Mrs. A.Barveen., AP/CSE

So kindly give us permission to conduct the course and to utilize the class room and lab.

Thanking you

Course Coordinator

PH D/CSE

Principal



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5.6.2017

CIRCULAR

Sub: Certificate Program

It is planned to conduct the Certificate Program for the third year Computer Science and Engineering students.

The Certificate Program is short term certificate course which are designed and offered by our department for the benefit of our students. Certificate Program will be conducted at free of cost and based on the performance of the participated students, the merit certificate will be issued after the successful completion of the course.

Students those who are willing to attend the below mentioned course can enroll their name to the course coordinator.

Name of the Certificate Program	Course Coordinator
Basic Concepts of Deep Learning	Mrs.S.Shanmuga Priya., AP/CSE and Mr. A.Barveen., AP/CSE
Commencement of cour	rse from 12-6-17 to 17-6-17
Time: 9.00	AM – 5.30 PM

Course Coordinator

IQAC Coordinator

H₀D_CSE

Principal

M.I.E.T ENGINEERING COLLEGE, TRICHY - 7.

DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING

Certificate Program (III Year - V Semester)

Course Syllabus

Name of the course: Basic Concepts of Deep Learning

Course Code: CS17181

Course Coordinator: Mrs. S.Shanmugapriya, AP/CSE & Mrs. A.Barveen., AP/CSE

Total Hours: 38 Academic Year: 2017-2018

Objective

Introduce major deep learning algorithms, problem settings and their applications to solve problems.

UNIT I -INTRODUCTION

6

Introduction to Deep Learning- Bayesian Learning- Decision Surfaces-Linear Classifiers-Linear Machines with Hinge Loss-Optimization Techniques-Gradient Descent- Batch Optimization

UNIT II- NEURAL NETWORK

Q

Introduction to Neural Network- Multilayer Perceptron-Back Propagation Learning-Unsupervised Learning with Deep Network- Auto encoders-Convolutional Neural Network- Building blocks of CNN- Transfer Learning

UNIT III - NORMALIZATION

8

Revisiting Gradient Descent- Momentum Optimizer- RMSProp, Adam- Effective training in Deep Net- early stopping- Dropout-Batch Normalization- Instance Normalization- Group Normalization

UNIT IV - DEEP LEARNING ARCHITECTURES

8

Recent Trends in Deep Learning Architectures-Residual Network, Skip Connection Network-Classical Supervised Tasks with Deep Learning-Image Denoising- Semantical Segmentation

UNIT V - LSTM NETWORKS

8

LSTM Networks-Generative Modeling with DL- Variational Autoencoder- Generative Adversarial Network Revisiting Gradient Descent

Course Outcomes

The students will be able

 To identify the deep learning algorithms which are more appropriate for various tasks of learning in different domains.

• To implement deep learning algorithms to solve problems.

References

- Deep Learning for Vision Systems, by Mohamed Elgendy.
- Grokking Deep Reinforcement Learning, by Miguel Morales.
- Deep Learning: A Practitioner's Approach, by Adam Gibson and Josh Patterson .

Course Coordinator

MD/CSE



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Email: principalengg@mlet.edu, contact@mlet.edu
Website: - www.mlet.edu

Ph: 0431 - 2660 303

Willing Student list

CP1 Coordinator: Mrs.S.Shanmuga Priya., AP/CSE and Mrs. A.Barveen., AP/CSE

CP2 Coordinator: Mr.A. Joshua Issac, AP/CSE and Mr.P. Manikandan, AP/CSE

Academic Year: 2017-2018

SL. NO	STUDENT NAME	EP1 Basic Concepts of Deep Learning	<u>CP2</u> Fundamentals of Data science
1.	Ahamed Younus Khan. M		V
2.	Akilan. P		~
3.	Amrutam Sunil. S		· ·
4.	Anusiya Devi. S		• •
5.	Aravindhan. R		y
6.	Arif Mohammed. M		~
7.	Aswathi. S		~
8.	Ayesha Shereen, A.K		/
9.	Daaneshwaran. R		√
10.	Farjana Fathima. S		√
11.	Gayathri. S		✓
12.	Gomathi. K	Ė	
13.	Hajara Bathool. A		· ·
14.	Hephzibah. P		√
15.	Ibrahim Umarkhan. T		· ·
16.	Jayaprakash. S		11



SL. NO	STUDENT NAME	CP1 Basic Concepts of Deep Learning	<u>CP2</u> Fundamentals of Data science
17.	Jerophine Santhiya. S		√
18.	Kabil. R		✓
19.	Karishma. R		✓
20.	Kaviya. A		✓
21.	Lamya Bhanu. T		
22.	Lavanyaa. N		✓
23.	Manikandan. S		√
24.	Meghasushmitha. J		✓
25.	Mohamed Asik. M		✓.
26.	Mohamed Bilal. K		✓
27.	Mohamed Munaf. M		√
28.	Mohamed Muzammil. M		√
29.	Mohammad Saifullah. A		✓
30.	Mohammed Ansar. S	2	✓
31.	Nichol Raj. R		✓
32.	Nivetha. R		✓
33.	Nivetha. S		✓
34.	Nivethini. L		✓
35.	Nizar Ahamed. H		√
36.	Noorul Vaisha Parveen. M		√
37.	Parthiban (11.03.1999). R		
38.	Prasana. V		√
39.	Prem. R		√

SL. NO	STUDENT NAME	CP1 Basic Concepts of Deep Learning	CP2 Fundamentals of Data science
40.	Priya. M		√
41.	Priyanka. A		✓
42.	Raja. S		1
43.	Rajesh. L		
44.	Ramela. R		✓
45.	Ramya. G		√
46.	Ramya. V		√
47.	Revathi. M		✓
48.	Riyaz Ahmed. II		<
49.	Robika. S		√
50.	Rumana Fervin. A		✓
51.	Sabur Khan. S		
52.	Sagunthala, R	×	√
53.	Sameer Khan. N		√
54.	Shabi Ahmed. S		√ .
55.	Shabira Begam. R		√
56.	Shajeetha Parveen. J		√
57.	Shameena Arasi. S		✓
58.	Shyamsundar. T		√
59.	Sibiya Nilosha. A		√
60.	Sivagami. K		√
61.	Soundharya. S		✓
62.	Subashchandrabose. M		~

SL. NO	STUDENT NAME	CP1 Basic Concepts of Deep Learning	<u>CP2</u> Fundamentals of Data science
63.	Subash. N		✓
64.	Subasree. M.V		✓
65.	Sumathradevi. K		V
66.	Uma Shankar, G		✓
67.	Ummal Bajria. A		√
68.	Vasanth. S		✓
69.	Vimal Britto. J		2
70.	Yaminipriya. C.M		
71.	Zaina Zuhaina. M		✓
72.	Elangovan. S		√
73.	Roshini. A		√
74.	Sathish Kumar. S		√ ·
75.	Subha. E		√
76.	Abdul Basith. M	-	
77.	Abinaya. V	· ·	
78.	Ajimeer Ali. A	✓	
79.	Ananthalakshmi. V	✓	3
80.	Anjalidevi. D		
81.	Anuja. P	· ·	40
82.	Asma Ul Mymoona. R	-	
83.	Balasubramaniam. S		
84.	Bhuvaneswari. G	-	
85.	Bhuvaneswari. P	✓	

SL. NO	STUDENT NAME	CP1 Basic Concepts of Deep Learning	<u>CP2</u> Fundamentals of Data science
86.	Chinraj. D	√	
87.	Dhayanithi. P	✓	
.88.	Durga Devi. M	Y	
89.	Durka Devi. G	√	
90.	Hisam Zahid. M	. ✓	
91.	Iniyavan. M	~	
92.	Iswarya. R	~	
93.	Karthick. D	√	
94.	Karthika. E		
95.	Karthika (20-04-1998). M		
96.	Karthika (13-12-1998). M	√	
97.	Kaviyarasu. S	√	
98.	Kowsalya. R	✓	
99.	Lavanya. S	√	7 2
100.	Manivel. R	✓	
101.	Meenambal. S	1	
102.	Megala. M	✓	
103.	Mohamed Vasim. N	√	
104.	Mubarak. K		0
105.	Muhammadhu Sulaimaan. S		*
106.	Muthulakshmi. S	√	
	Nandhini. T	· ·	
107.		1	The state of the s

SL. NO	STUDENT NAME	CP1 Basic Concepts of Deep Learning	<u>CP2</u> Fundamentals of Data science
109.	Nataraj. J.S	· ·	-
110.	Nisha. A	✓	
111.	Nivetha. K		
112.	Prabu. M	_ /	
113.	Prakash. S	✓	
114.	Preethi. R	✓	20
115.	Punitha. P	1	
116.	Punitha. R	√ ·	Z-2-30
117.	Rajeshwari. R	✓	
118.	Ramakrishnan. M	· ✓)
119.	Sabitha. S	✓ _	
120.	Sangeetha. S	√	
121.	Sanofar Raj Mohamed	✓	
122.	Shameema Shanas. S	✓	•
123.	Sharmila. B	√	
124.	Sharmila. L	✓	
125.	Sivasankari. V	1	
126.	Sowndarya. A	✓	
127.	Sulthana. A	√	
128.	Syed Abdul Kathir. S	√	=
129.	Syed Ijaz. J	√	
130.	Tamil Selvi. M	√	3
131.	Tamil Selvi. K	· •	

SL. NO	STUDENT NAME	CP1 Basic Concepts of Deep Learning	<u>CP2</u> Fundamentals of Data science
132.	Vaijeyanthi. T	/	
133.	Vinothini. P	/	* 2.1
134.	Yasmin. Z	✓ ' =	
135.	Alageswari. N	✓	40.5 -030
136.	Ameersohail. S	✓	
137.	Dhamotharan. V		2 8
138.	Eswari. I	~	:
139.	Fathima Begam. A	· /	-
140.	Hariharan, G	√	
141.	Johnson, S	√	
142.	Mohamedrilwan. M.F	√	
143.	Muruganantham. M	√	tis
144.	Narmatha. R	✓	
145.	Raj Kumar. P	✓	
146.	Renupriya. P	√	
147.	Surya. V	✓	
148.	Syed Abdul Razak. M	✓	
149.	Vignesh. M	√ 22	
150.	Vishnuvardhan. M	√	
151.	Yazhini. T	√	
152.	Bava Bahrudeen. R	√	
153.	Abdul Kuthoose, M	21	
154.	Abinaya. M		•

SL. NO	STUDENT NAME	CP1 Basic Concepts of Deep Learning	<u>CP2</u> Fundamentals of Data science
155.	Ahamed Basha. M		
156.	Francis Santhanaraj. A		
157.	Gowtham Kumar. V		
158.	Jiyasarageorge		17.54
159.	Kanagaraj. N		
160.	Kaviya. M		
161.	Keerthana. R		2
162.	Mohamed Abbas. S		
163.	Mohamed Anas. A		
164.	Mohamed Gani, Z		
165.	Mohamed Rafeek. S		
166.	Monica Mary. J		3
167.	Muthukumar. S		
168.	Nafeela. S		
169.	Priyanga. M		
170.	Puvima. P		
171.	Rachel Debby. F		
172.	Roja. T		
173.	Vinodhini. J	-	8.
174.	Aarthi. S		
175.	Bakiyalakshmi. S		DATE OF THE OWNER OF THE OWNER.
176.	Barani. S		
177.	Imran. M		

SL. NO	STUDENT NAME	CP1 Basic Concepts of Deep Learning	<u>CP2</u> Fundamentals of Data science
178.	Infant Princy Merlin. J		
179.	Jegadeeswari. K		
180.	Krishnaveni. N		
181.	Mathan, P		
182.	Mohamed Farhan, S.H		
183.	Muthumeenakshi. S		
184.	Riyaz Ahamed. N		, , , , , , , , , , , , , , , , , , ,
185.	Saravanakumar. S	12	***************************************
186.	Sathick Batcha. S		
187.	Sivanesan. G	material de la constitución de l	
188.	Udaya Kumar. M		
189.	Vijay Priyan. M		

2. Buy
Course Coordinator

H₀D_{CSE}

Principal



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Certificate Program (III Year-V Semester)

Course Delivery

Name of the Course: Basic Concepts of Deep Learning

Course Code: CS17181

Course Coordinator: Mrs.S.ShanmugaPriya., AP/CSE and Mrs. A.Barveen., AP/CSE

Total Hours: 38

Academic Year: 2017-2018

Sl.No	Topics to be Covered	Hours	Date of Delivery
1.	Introduction to Deep Learning	1	
2.	Bayesian Learning	1	
3.	Decision Surfaces	1	
4.	Linear Classifiers	1	12-6-17
5.	Linear Machines with Hinge Loss	1	
6.	Optimization Techniques	1	
7.	Gradient Descent	1	
8.	Batch Optimization	1	
9.	Introduction to Neural Network	1	
10.	Multilayer Perceptron	1	
11.	Back Propagation Learning	1	13-6-17
12.	Unsupervised Learning with Deep Network	1	
13.	Autoencoders	1	
14.	Convolutional Neural Network	1	
15.	Building blocks of CNN	1	
16.	Transfer Learning	1	14-6-17
17.	Revisiting Gradient Descent	. 1	
18.	Momentum Optimizer	1	

SI.No	Topics to be Covered	Hours	Date of Delivery
19.	RMSProp	1	¥
20.	Adam	1	
21.	Effective training in Deep Net	1	
22.	early stopping-	1	
23.	Dropout-Batch Normalization	1	
24.	Instance Normalization		
25.	Group Normalization	1	15-6-17
26.	Recent Trends in Deep Learning Architectures	1	
27.	Residual Network	1	
28.	Skip Connection Network	1	
29.	Classical Supervised Tasks with Deep Learning	1	
30.	Image Denoising	2	
31.	Semantic Segmentation	1	16-6-17
32.	LSTM Networks	2	
33.	Generative Modeling with DL	1 1	
34.	Variational Auto Encoder	1	17-6-17
35.	Generative Adversarial Network Revisiting Gradient Descent	2	17-6-17
	Total Hrs		38 hrs
36.	Revision	2	17-6-17
37.	Test	1	17-6-17

Course Coordinator

Hopicse /

Principal



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Resource Person Details

Title of the program	Basic Concepts of Deep Learning
Course Code	CS17181
Duration and timing of the program	38 Hrs, 09.00 AM – 05.30 PM
Name of the resource person	Mrs.S.Shanmuga Priya., AP/CSE
Photo of the resource person	
Email address	shanmugapriya.s@miet.edu
Contact number	9384127688
Designation	Assistant Professor
Educational qualification	 Completed B.Tech., Information Technology from School of engineering and Technology Bharthidhasan university in the year 2004. Completed M.Tech., Information Technology from Sathyabama University in the year 2006
Experience	• Teaching Experience – 11 Years.



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Ph: 0431 - 2660 303

Resource Person Details

Title of the program	Basic Concepts of Deep Learning
Course Code	CS17181
Duration and timing of the program	38 Hrs, 09.00 AM – 05.30 PM
Name of the resource person	Mrs.A.Barveen., AP/CSE
Photo of the resource person	
Email address	barveen.a@miet.edu
Contact number	9952848099
Designation	Assistant Professor
Educational qualification	 Completed B.E., Computer Science and Engineering from Shanmuganathan Engineering College in the year 2008. Completed M.E., Computer Science and Engineering from M.I.E.T Engineering College in the year 2013.
Experience	• Teaching Experience – 8 Years.



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Ph: 0431 - 2660 303

Certificate Course (III Year -V Semester) Attendance Sheet

Name of the course: Basic Concepts of Deep Learning

Course code: CS17181

Course coordinator: Mrs.S.Shanmuga Priya., AP/CSE and Mrs. A.Barveen., AP/CSE

Academic Year: 2017-2018

SL. NO	ROLL NO	STUDENT NAME	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
1.	E1155001	Abdul Basith. M	1	1	1	1	1	1	1	1	1	(/	1	1	1	a	a	۵	a	a	O,
2.	E1155002	Abinaya. V	1	1	1	1	ſ	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
3.	E1155003	Ajimeer Ali. A	1	1	1	1	1	1	1	a	0	a	0	a	a	a	1	1	1	1	1	1
4.	E1155004	Ananthalakshmi. V	1	1	1	1	1	- /	1	- [(1	1	1	1	1	1	1	(1	1	1
5.	E1155006	Anjalidevi. D	1	1	1	1	(1	1	1	1	1	1	(1	./	1	((1	1	1
6.	E1155007	Anuja. P	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	~	1	1	1
7.	E1155009	Asma Ul Mymoona. R	(1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	_	1	1	1
8.	E1155011	Bhuvaneswari. G	1	1	1	(1	1	1	1	1	1	1	1	(1	1	((1	1	1
9.	E1155012	Bhuvaneswari. P	(ſ	1	1	(1	1	-	1	-	(1	(1	(Ì		(1	1
10.	E1155013	Chinraj. D	a	a	a	a	a	a	Q.	1	1	1	1	1	1	1	1	1	1	/	1	1
11.	E1155014	Dhayanithi. P	1	(1	1	1	1	1	1	/	1	1	1	1	1	1	(1	1	1	7

SL. NO	ROLL NO	STUDENT NAME	1	2	3	4	.5	6	7	3	9	10	11	12	13	14	15	16	17	18	19	20
12.	E1155015	Durga Devi. M	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
13.	E1155016	Durka Devi. G	1	1	1	1		,	1	1	1	1	1	1	1	1	1	1	1	1	1	1
14.	E1155019	Hisam Zahid. M	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
15.	E1155021	Iniyavan. M	^	1	1	ſ	1	1	ſ	0	0	0	a	0	a	a	(1	1	((1
16.	E1155022	Iswarya. R	(1	1	1	1	1	1	1	1	1	1	/	1	1	1	1	1	1	(/
17.	E1155024	Karthick. D	OL	a	a	0	a	a	a	1	1	1	1	1	1	1	1	1	1	1	1	1
18.	E1155025	Karthika. E	1	1	1	1	1	1	1	1	1	1	1		1	1	i	1	1	1	1	1
19.	E1155026	Karthika (20-04-1998). M	1	1	1	1	1	1	1	1	1	1		1		1.	1	1	1	. (1	1
20.	E1155027	Karthika (13-12-1998). M	1	1	1	1	1	^	1	1	r	1	1	1	1	1	1	1	1	_	1	1
21.	E1155028	Kaviyarasu. S	1	1	1	1	1	1	1	1	1	1	1	1	1		a	a	a	a	a	a
22.	E1155029	Kowsalya. R	1	1	1	1	1	^	1	1	1	1	1	1		1	/	1	1	1		1
23.	E1155031	Lavanya. S	1	1	1	1	1	1	1	1	1	1	1	./	1	1	1	1	1	(1	1
24.	E1155032	Manivel. R	1	1	1	1	1	1	1	(1	1	1	(1	1	/	/	1	1	1	1
25.	E1155033	Meenambal. S	1	1	1	1	1	1	1	^	1	/		1	7	1	X	1	/	1	1	1
26.	E1155034	Megala. M	1	1	1	1	1	1	1	1	1	1	,	1	1	1	1	1	1	1	1	1
27.	E1155036	Mohamed Vasim. N	1	1	1	1	1	1	1	(1	i'	7	1	1	1	1	1	1	1		1
28.	E1155039	Muthulakshmi. S	1	1	1	1	1	1.	1	1	(.	1	1	1	1	1	1	1	1		1	1
29.	E1155041	Nandhini. T	1	1	1	1	1	1	1	1	1	1	1	1	1	/	1	/	1	1		/

SL. NO	ROLL NO	STUDENT NAME	1	2	3	4	5	6	7 ·	8	9	10	11	12-	13	14	15	16	17	- 18	19	20
30.	E1155042	Nasira Parveen. A	1	1	1	1	1	1	1	6	1	1	1	1	(1	1	1	/	1	1	1
31.	E1155043	Nataraj. J.S	a	a	a	a	2	a	a	,	1	1	1	1	1	1	1	1	/	1	1	1
32.	E1155044	Nisha. A	1	/	1	1	(1	1	1	1	1	1	1	1	,	. /	1	1	-	1	1
33.	E1155045	Nivetha. K	1	1	1	1	1	1	1	1	/	1	~	1	1	/	1.	1	1	1	1	1
34.	E1155046	Prabu. M	1	1	1	1	1	1	1	a	a	a	a	a	a	a	1	1	1		1	1
35.	E1155047	Prakash. S	1	1	1	1	(1	1	1	1	1	1	1	1	1	0	0	a	a	a	a
36.	E1155048	Preethi. R	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1.	1	1
37.	E1155049	Punitha. P	1	1	1	1	1	1	1	1	1	1	/		1	1	((1	1
38.	E1155050	Punitha. R	1	1	1	/	^	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
39.	E1155052	Rajeshwari. R	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	7	1	(/
40.	E1155053	Ramakrishnan. M	1	1	1	1	(1	1	1	1		(1	1	/	1	1	1	^	1	1
41.	E1155054	Sabitha. S	1	1	1	1	1	1	1	1	1	./	1	1	_	1	1	1	1	(1	1
42.	E1155055	Sangeetha. S	1	1	1	1	1	(1	1	1	1	1	1	1	/	/	7	1	1	(/
43.	E1155056	Sanofar Raj Mohamed	1	1	1	1	1	1	1	1	1	1	1	/	1	1	1	/	1		(/
44.	E1155057	Shameema Shanas. S	1	1	1	1	1	1	1	1	1	1	11	1	1	1	1	1	(1	(1
45.	E1155058	Sharmila. B	1	1	1	((/	1	1	1	1		1	(./	1	./	(1	1	1
46.	E1155059	Sharmila. L	0	/	1	(1	1	1	1	1	1	1	1	1	1	(1	((1	/
47.	E1155060	Sivasankari. V	1.	1	1	. (1	1	7	1	1	1	(1	1	^	l	1	1	(-

SL.	ROLL	STUDENT NAME	1	2	3	4	5	6	7	3	9	10	11	12	13	14	-15	16	17	18	19	20
NO	NO	STODENT NAME															l li					
48.	E1155061	Sowndarya. A	(1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	;
49.	E1155062	Sulthana. A	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	,
50.	E1155064	Syed Abdul Kathir. S	1	1	1	1	1	1	1	1	1	1	1	1	1	1	a	a	a	a	a	0
51.	E1155065	Syed Ijaz. J	a	.α	a	a	a	a	a	1	,	1	1	/	1	1	1	1	1	/	1	1
52.	E1155066	Tamil Selvi. M	1	1	1	1	1	(·J	1	1	1	/	1	1	1	1	1	1	1	1	/
53.	E1155067	Tamil Selvi. K	1	1	1	1	ſ	1	1	1	1	1	/	/		1	1	1	1	1	1	1
54.	E1155068	Vaijeyanthi. T	1	1	1	1	1	/	1	1	1	1	1	-	1	(/	1	1	1	1	/
55.	E1155069	Vinothini. P	1	1	1	1	/	1	1	1	1	1	1	1		(1	1	1	1	1	/
56.	E1155071	Yasmin. Z	1	1	1	1	/	/	1	1	1	1	1	1	1	1	-/	1	1	/	1	1
57.	E3145092	Alageswari. N	1	1	/	1	/	(1	1		11	1	1	7	1	1	1	1	1	1	/
58.	E2165073	Ameersohail, S	1	1	1	1	-7	1	1	0	a	a	9	2	a	Q	1	1	1	10	- 1	,
59.	E2165076	Eswari. I	1	1	1	1	1	1	1	1	1	1	1	1	1	./	1	1	1	./	1	/
60.	E2165077	Fathima Begam. A	1	(1	1	1	1	ſ	1	1	/	1	1	1	1	1	^	1	ľ	1	/
61.	E2165078	Hariharan. G	1	1	1	1	1	1	1	1	(1	1	1	1	1	1	1	(1	1	1
62.	E2165079	Johnson. S	1	(1	1	1	/	1	1	((1	1	(1	(/	1	1	1	/
63.	E2165080	Mohamedrilwan. M.F	1	1	1	1	1	1	/	1	ſ	1	1	7	1	1	1	1	1	1	1	/
64.	E2165081	Muruganantham. M	((1	(1	1	1	1	7	1	(1	1	1	1	(1	(1	/
65.	E2165082	Narmatha. R	1	1	(1	1	1	1	-(-1	1	1	1.	1	/	1	(1	1	1	/

SL. NO	ROLL NO	STUDENT NAME	. 1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
66.	E2165085	Raj Kumar. P	 	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	/	-	1
67.	E2165086	Renupriya. P	(1	1	1	1	1	,	1	1	1	1	1	1	1	1	1	/	1	1	1
68.	E2165087	Surya, V	a	a	a	a	a	a	a	.1	(1	1	1	1	1	1	,	1	1	1	/
69.	E2165088	Syed Abdul Razak. M	(1	1	1	1	1	1	a	a	α	a	a	a	a	1	1	1	1	1	1
70.	E2165089	Vignesh. M	1	1	1	1	1	1	1	1	1	^	1	1	1	1	1	(1	1	1	1
71.	E2165090	Vishnuvardhan. M	1	1	1	1	1	1	1	(1	./	(1	1	1	1	1	1	1	7	1
72.	E2165091	Yazhini. T	1	1	1	1	1	X	1	1	1	1	1		(1	1	-	1	7	1	1
73.	E3155072	Bava Bahrudeen. R	1	1	1	1	1	1	1	1	1	1		1	1	1	-	1	1	1	1	1

SL.N O	ROLL NO	STUDENT NAME	21	22	23	24	24	25	26	27	28	29	30	31	32	33	34	35
1.	E1155001	Abdul Basith. M	a	1	1	1	1	1	1	1	1	α	a	a	α	a	a	a
2.	E1155002	Abinaya. V	1	1	1	(1	1	1	1	1	1	1	1	(1	1	1
3.	E1155003	Ajimeer Ali. A	1	1	1	1	1	1	1	1	1	/	1	1	1	1	1	1
4.	E1155004	Ananthalakshmi. V	1	1	(,	1	1	1	(-/	1	1	/	1	1	-/	1
5.	E1155006	Anjalidevi. D	1	-	1	1	1	1.	1	1	1	-	1	1	1	(1	7

SL.N O	ROLL NO	STUDENT NAME	21	22	23	24	24	25	26	27	28.	29	30	31	32	33	34	35
6.	E1155007	Anuja. P	1	/	1	/	1	1	1	1	1	1			_	1	1	1
7.	E1155009	Asma Ul Mymoona. R	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
8.	E1155011	Bhuvaneswari. G	/	1	1	1	1	1	1	1	1	1	1		1	1	1	1
9.	E1155012	Bhuvaneswari. P	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
10.	E1155013	Chinraj. D	/	/	1	1	1	1	1	1	1	-	1	1	1	1	1	1
11.	E1155014	Dhayanithi. P		a	0	0	0	a	a	a	a	1	1	6	1	<i>(</i> -	1	1
12.	E1155015	Durga Devi. M	1,	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
13.	E1155016	Durka Devi. G	1	1	1	1	/	^	1	/	1	1	1	1	1	1	1	1
14.	E1155019	Hisam Zahid. M	1	1	1	1	_	1	1	1	1	/	1	1	-	(1	1
15.	E1155021	Iniyavan. M	1	/	(1	1	1	1	1	1	1	(1	1		1	/
16.	E1155022	Iswarya. R	1	1	1	1	1	1	1	1	1	1	1	1	1	1	_	1
17.	E1155024	Karthick. D	1	1	1		1	1	/	1	1	7	(1	7	1	1
18.	E1155025	Karthika. E	1	1	1	1	1	1	/	/	/	1	1	(1	1	1	1
19.	E1155026	Karthika (20-04-1998). M		1	1	/			/	1	/	CL	CL	a	a	a	a	0
20.	E1155027	Karthika (13-12-1998). M		1	1.	1	1	1		_	1	120	((1	^	-	1
21.	E1155028	Kaviyarasu. S	a	1	1	1	1	/	1	/	/	1	1	1	. (1	1	/
22.	E1155029	Kowsalya. R	1		1	1	1		1	1	/	(.	((1	1	1	1

SL.N	ROLL	STUDENT NAME	21	22	23	24	24	25	26	27	28	29	30	31	32	33	34	35
0	NO	STODENT NAME																
23.	E1155031	Lavanya. S	1	1	1	1	/	1	1	1	1	1	1	1	1	1	1	1
24.	E1155032	Manivel, R	1	1	1	1	1	1	1	1	1	a	a	a	a	a	α	a
25.	E1155033	Meenambal. S	1	1	1	1	1	1	1		1	(1	1	1	1	1	1
26.	E1155034	Megala. M	1	1	1	1	1	1	1	1	1	1	ſ	1	1	1	1	1
27.	E1155036	Mohamed Vasim. N	1	1	1	1	1	1	1	^	1	1	1	1	1	1	1	1
28.	E1155039	Muthulakshmi. S	1	1	1	1	1	1	/	1	1	,	1	1	1	1	1	1
29.	E1155041	Nandhini. T	1	1	1	1		1	1	1	1	1	1	1	1	(1	1
30.	E1155042	Nasira Parveen. A	1	1	1	1	<i>^</i>		. /		1	1	1	1	1	1	1	1
31.	E1155043	Nataraj. J.S	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	/
32.	E1155044	Nisha. A	1	1	1	/	/	1	1		1	1	1	1	1	1	1	
33.	E1155045	Nivetha. K	1	1	1.	1	1		1	1	1	/	1	1	1	1		/
34.	E1155046	Prabu. M	1	a	a	a	a	a	a	م	a	1	1	1	1	1	1	1
35.	E1155047	Prakash. S	a	(1	1	1	1	1	1	1	1	(((1	1	
36.	E1155048	Preethi. R	1	1	1	1	1	1	1	1	1	(1	1	1	1	1	1
37.	E1155049	Punitha. P	1	1	1	1	1	1	1	1	1	1	(1	1	(1	1
38.	E1155050	Punitha. R	1	1	1	1	1	1	1	(1	(1	1	1	/	1	1
39.	E1155052	Rajeshwari. R	1	1	1	1	1	1	1	11	:1	1	1	1	1	1	1	/

		(***)																
SL.N O	ROLL NO	STUDENT NAME	21	22	23	24	24	25	26	27	28	29	30	31	32	33	34	35
40.	E1155053	Ramakrishnan. M	1	/	1	1	1	1	1	1	1	1	1	1	1	1	. /	-/
41.	E1155054	Sabitha. S	1	1	1	1		/	1	1	1	ſ	1	1	1	7	^	1
42.	E1155055	Sangeetha. S	1	/	/	1	1	1	1	1	1	1	~	ſ	/	1	1	1
43.	E1155056	Sanofar Raj Mohamed	1	_	1	1	1		1	/	1	1	-	1	-	1	_	1
44.	E1155057	Shameema Shanas. S	1			1	1	1	1	1	1	1	1	(1		1
45.	E1155058	Sharmila. B		_	1	1	1	1	/	1	1		1	1	1	(1.	1
46.	E1155059	Sharmila. L		1	1	1	1	1		1	1	(1	1	1	1	/	/
47.	E1155060	Sivasankari. V	1	1	1	1	1	1	1	1		1		1	7	1	1	1
48.	E1155061	Sowndarya. A	1	1	1	1	1	/			/	1	1	1	1	1	/	/
49.	E1155062	Sulthana. A	1	-	1	/	1	1	1	1	1	1.	1	1	1	1	1	1
50.	E1155064	Syed Abdul Kathir. S	0	1	/	1	1	1	1	1	1	0	0	a	a	a	a	a
51.	E1155065	Syed Ijaz. J	1	1	1	1		1	1	1	1		/	1	1	1	1	/
52.	E1155066	Tamil Selvi. M	1	1	1	/	/		1	1	1	1	1	1	1		-	1
53.	E1155067	Tamil Selvi. K	1	1	1	1	1	1	1		1	1	1	1	1	1	1	1
54.	E1155068	Vaijeyanthi. T	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
55.	E1155069	Vinothini, P		1	(1	1	1	1	1	1	1	1	1	1	1	1	/
56.	E1155071	Yasmin. Z	1	1	1	1	1	1	(1	1	/	/	1	1	1	1	>



SL.N O	ROLL NO	STUDENT NAME	21	22	23	24	24	25	26	27	28	29	30	31	32	33	34	35
57.	E3145092	Alageswari. N	1	1	/	1	1	1	1	1	1	7	/		1	1		/
58.	E2165073	Ameersohail. S	a	1	1	/	1	1.	1		1	1	1	1	1	1	1	1
59.	E2165076	Eswari. I	1	1	1	1	1	1	1	1	1	1	^	1		1	1	1
60.	E2165077	Fathima Begam. A	1	1	1	1	1	^	1	1	1	1	1	1	1	1		1
61.	E2165078	Hariharan. G	1	1	1	1	1	1	1	1	1	1	1	1		(/
62.	E2165079	Johnson, S	1	a	a	a	a	a	a	6	a	1.	1	1	1	1.	1	1
63.	E2165080	Mohamedrilwan. M.F	1	1	1	1	1	1	1	1	1	1	1	1	1	1	-	1
64.	E2165081	Muruganantham. M	1	1	1	1	1	1	1		1	1	1	1	1	/	1	1
65.	E2165082	Narmatha. R	/	1	1	1	1	1	1	1	1	1	1	^	1	(1	/
66.	E2165085	Raj Kumar. P	1	1	1	1	1	/	1	1	7	a	a	à	α	a	O.	α
67.	E2165086	Renupriya. P	1	1	1	1	1	^	1		1	1	1	1	1	1	1	1
68.	E2165087	Surya. V	1	1	1	1	1	1	1	1	1	1	1	1	1	^	1	/
69.	E2165088	Syed Abdul Razak. M	1	1	1	1	1	1	1	/	1	^	^	1	1	1	1	1
70.	E2165089	Vignesh. M	1	1	1	1	1	1	1	_	1	1	1	1	1	1	1	1
71.	E2165090	Vishnuvardhan. M	1	1	1.	1	1	1	1	1	1	1	1	1	1	1	1	1
72.	E2165091	Yazhini. T	1	1	1	1	1	1	1	(1	1	1	1	1	1	1	1
73.	E3155072	Bava Bahrudeen. R	1	1	1	1	1	1	1	/	1	1	1	1	-	1	1	1

SL.N O	ROLL	STUDENT NAME	36	37	38	R&T
1.	E1155001	Abdul Basith. M	1	1	1	1
2.	E1155002	Abinaya. V	(1	1	1
3.	E1155003	Ajimeer Ali. A	(1	1	1
4.	E1155004	Ananthalakshmi. V	1	1	/	1
5.	E1155006	Anjalidevi. D	1	1	1	1
6.	E1155007	Anuja. P	1	1	1	1
7.	E1155009	Asma Ul Mymoona. R		1	1	1
8.	E1155011	Bhuvaneswari. G	1	1	1	1
9.	E1155012	Bhuvaneswari. P	1	1	1	1
10.	E1155013	Chinraj. D	1	1	1	1
11.	E1155014	Dhayanithi. P	1	1	1	1
12.	E1155015	Durga Devi. M	1	1	1	1
13.	E1155016	Durka Devi. G	1	1	1	1
14.	E1155019	Hisam Zahid. M	1	1	1	1
- 15.	E1155021	Iniyavan. M	1	1	1	1
16.	E1155022	Iswarya. R	1	(1	1

SL.N O	ROLL NO	STUDENT NAME	36 ·	37	38	R&T
17.	E1155024	Karthick. D	1	1	1	1
18.	E1155025	Karthika. E	1	1	/	1
19.	E1155026	Karthika (20-04-1998). M	/	(1	1
20.	E1155027	Karthika (13-12-1998). M	1	1	1	/
21.	E1155028	Kaviyarasu. S	1	1	1	1
22.	E1155029	Kowsalya. R	1	1	1	1
23.	E1155031	Lavanya. S	1	1	1	1
24.	E1155032	Manivel. R	1	1	1	1
25.	E1155033	Meenambal. S		1	1	1
26.	E1155034	Megala. M		1	1	1
27.	E1155036	Mohamed Vasim. N	1	1	1	1
28.	E1155039	Muthulakshmi. S	(1	1	1
29.	E1155041	Nandhini. T		1	1	1
30.	E1155042	Nasira Parveen. A	1	1	1	1
31.	E1155043	Nataraj. J.S	1	1	(1
32.	E1155044	Nisha. A	1	1	1	/
33.	E1155045	Nivetha. K	1	1	1	1

SL.N O	ROLL NO	STUDENT NAME	36	37	38	R&T
34.	E1155046	Prabu. M	1	1	1	1
35.	E1155047	Prakash. S	1	1	1	1
36.	E1155048	Preethi. R	1	1	1	1
37.	E1155049	Punitha. P	1	1	1	1
38.	E1155050	Punitha. R	1	1	1	1
39.	E1155052	Rajeshwari. R	1	1	1 -	1
40.	E1155053	Ramakrishnan. M	1	1	1	1
41.	E1155054	Sabitha. S	1	1	1	/
42.	E1155055	Sangeetha. S	1	1	1	1
43.	E1155056	Sanofar Raj Mohamed	-	1	1	1
44.	E1155057	Shameema Shanas. S		1	/	1
45.	E1155058	Sharmila. B	1	1	1	1
46.	E1155059	Sharmila. L	1	1	1	1
47.	E1155060	Sivasankari. V	/ /	1	1	/
48.	E1155061	Sowndarya. A	1	1	1	,
49.	E1155062	Sulthana. A	/	(1	1
50.	E1155064	Syed Abdul Kathir. S		1	/	1

SL.N O	ROLL NO	STUDENT NAME	36	37	38	R&T
51.	E1155065	Syed Ijaz. J	1	1	1	1
52.	E1155066	Tamil Selvi. M	1	1	1	/
53.	E1155067	Tamil Selvi. K	1	1	1	1
54.	E1155068	Vaijeyanthi. T	1	1	1	1
55.	E1155069	Vinothini. P	1	1	1	1
56.	E1155071	Yasmin. Z	1	1	1	1
57.	E3145092	Alageswari. N	/	1	1	1
58.	E2165073	Ameersohail. S	1	1	1	1
59.	E2165076	Eswari. I		1	1	1
60.	E2165077	Fathima Begam. A	1	1	1	/
61.	E2165078	Hariharan. G	/	1	1	1
62.	E2165079	Johnson, S	1	/	1	1
63.	E2165080	Mohamedrilwan. M.F	/	1	1	1
64.	E2165081	Muruganantham. M	1	/	1	1
65.	E2165082	Narmatha, R	1	1	1	1
66.	E2165085	Raj Kumar. P	1	1	1	/
67.	E2165086	Renupriya. P	1	1	1	/

SL.N O	ROLL NO	STUDENT NAME	36	37	38	R&T
68.	E2165087	Surya. V		1	1	1
69.	E2165088	Syed Abdul Razak. M	(1	1	1
70.	E2165089	Vignesh. M	1	1	1	1
71.	E2165090	Vishnuvardhan. M	1	1	/	1
72.	E2165091	Yazhini. T	1	1	1	1
73.	E3155072	Bava Bahrudeen. R	1	1	1	1

Course Coordinator



(Approved by AICTE, New Delhi, Affiliated to Anna University, Chennai)
TRICHY – PUDUKKOTTAI ROAD, TIRUCHIRAPPALLI – 620 007.
Email: principalengg@miet.edu, contact@miet.edu
Website: - www.miet.edu

Ph: 0431 - 2660 303

Certificate Program Assessment Test

Name of the course: Basic Concepts of Deep Learning

Course Code: CS17181 Academic Year: 2017-2018 Date: 17-6-17 Time: 1:00 hr

Total Marks: 40

Part A (2 marks * 20 = 40 marks)

1.

Which of the following is a subset of machine learning?

- A. Numpy
- B. SciPy
- C. Deep Learning
- D. All of the above

2.

How many layers Deep learning algorithms are constructed?

- A. 2
- B. 3
- C. 4
- D. 5

3.

The first layer is called the?

- A. inner layer
 - B. outer layer
 - C. hidden layer
 - D. None of the above

RNNs stands for?

- A. Receives neural networks
- B. Report neural networks
- C. Recording neural networks
- D. Recurrent neural networks

5.

Which of the following is well suited for perceptual tasks?

- A. Feed-forward neural networks
- B. Recurrent neural networks
- C. Convolutional neural networks
- D. Reinforcement Learning

6.

CNN is mostly used when there is an?

- A. structured data
 - B. unstructured data
 - C. Both A and B
 - D. None of the above
- 7) An unbiased coin is tossed five times. What is the probability of getting at least four heads?
 - O 3/8
 - \bigcirc 1/2
 - 0 1/32
 - 3/16

8.

Which of the following is/are Limitations of deep learning?

- A. Data labeling
- B. Obtain huge training datasets
- C. Both A and B
- D. None of the above

9.

Deep learning algorithms are _____ more accurate than machine learning algorithm in image classification.

- A. 33%
- B. 37%
- C. 40%
- D. 41%

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
- C. more than 50
- D. It is an arbitrary value

11.

Which of the following would have a constant input in each epoch of training a Deep Learning model?

- A. Weight between input and hidden layer
- B. Weight between hidden and output layer
- C. Biases of all hidden layer neurons
- D. Activation function of output layer

12.

Sentiment analysis using Deep Learning is a many-to one prediction task

- A. True
- B. False
- C. Can be true and fasle
- D. can not say

13.

In CNN, having max pooling always decrease the parameters?

- A. True
- B. False
- C. Can be true and false
- D. Can not say

14.

1) Perform Matrix Multiplication, A * B for the given matrices A and B.

$$A = \begin{bmatrix} 4 \\ 5 \\ 6 \end{bmatrix} \qquad B = \begin{bmatrix} 1 & 2 & 3 \end{bmatrix}$$

15.

[32]

Which neural network has only one hidden layer between the input and output?

- A. Shallow neural network
 - B. Deep neural network
 - C. Feed-forward neural networks
 - D. Recurrent neural networks

Calculate the following, where n is the number of elements in the vector x:

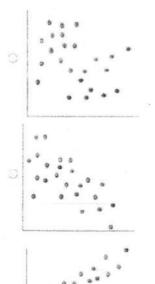
$$x = (21, 40, 33, 55, 61, 94, 84)$$

$$\frac{1}{n} \left(\sum_{i=1}^{n} x_i \right)$$

- 0 55
- 55.428
- O 45.428
- 056.562

17.

In which of the following graphs, can a straight line separate the red and blue points, such that the red points lie on side of the line and the blue points on the other side?



18.

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
 - C. 96
 - D. 128

19.

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

20.

Which of the following statements is true when you use 1×1 convolutions in a CNN?

- A. It can help in dimensionality reduction
- B. It can be used for feature pooling
- C. It suffers less over fitting due to small kernel size
- D. All of the above

Course Coordinator

Hop CSE



(Approved by AICTE, New Delhi, Affiliated to Anna University, Chennal)
TRICHY - PUDUKKOTTAI ROAD, TIRUCHIRAPPALLI - 620 007.
Email: principalengg@miet.edu, contact@miet.edu
Website: - www.miet.edu

Ph: 0431 - 2660 303

One Page Report

Name of the course: Basic Concepts of Deep Learning

Course Code: CS17131

Course Coordinator: Mrs.S.Shanmuga Priya., AP/CSE and Mrs. A.Barveen., AP/CSE

Total Hours: 38 Academic Year: 2017-2018

I hereby affirm that the entire course contents listed in the course syllabus of the certificate program "Basic Concepts of Deep Learning" have educated to the students as the part of the prescribed co – curricular activities through certificate program.

They have been given the basic concepts of the topics mentioned and students clearly understood the fundamentals of Deep learning and learn that the deep learning has advanced feature than machine learning.

I confirmed that the certificate program titled as "Basic Concepts of Deep Learning" has been conducted in the beginning of the semester and course delivery along with attendance of the students was recorded.

I confirmed that all the students were actively attended this certificate program and performed well throughout the program and eligible students received the certificate.

Course Coordinator

H₀D/CSE

Principal

E.T. ENGINEERING COLLEGE Trichy, Pudukkottai Road, Trichy - 620 007. Course Completion Certificate This is to Certify that Mr/Ms. G. Bhuvaneshwari of Third year CSE has Completed the Course on Basic Concepts of Deep Learning from 12.6.17 to 17.6.17 Principal rśe 'Coordinator GUNDUR, TIRUCHIRAPPALLI-620 007.

E.T. ENGINEERING COLLEGE Trichy, Pudukkottai Road, Trichy - 620 007. Course Completion Certificate This is to Certify that Mi/Ms. S. Lavanya of Third year CSE has Completed the Course on Basic Concepts of Deep Learning from 12.6.17 to 17.6.17 se Coordinator Principal GUNDUR, TIRUCHIRAPPALLI-620 007.

E.T. ENGINEERING COLLEGE Trichy, Pudukkottai Road, Trichy - 620 007. Course Completion Certificate This is to Certify that Mar/Ms. Sanofar Raj Hohamed of Third year CSE has Completed the Course on Basic Concepts of Deep Learning from 12.6.17 to 17.6.17 Principal M.I.E.T. ENGINEERING COLLEGE GUNDUR, TIRUCHIRAPPALLI-620 007.

E.T. ENGINEERING COLLEGE Trichy, Pudukkottai Road, Trichy - 620 007. Course Completion Certificate This is to Certify that Mr/AAs. G. Hariharan of Third year CSE has Completed the Course on Basic Concepts of Deep Learning from 12.6.17 to 17.6.17 rse Coordinator Principal M.I.E.T. ENGINEERING COLLEGE GUNDUR, TIRUCHIRAPPALLI-620 007.

	M.I.E.T. ENGINEERING COLLEGE Trichy, Pudukkottai Road, Trichy - 620 007.
	Course Completion Certificate INSTITUTIONS Since 1984
E ST	This is to Certify that Mr/Ms. N. Mohamed Vasim
0 0 0	of Third year CSE has Completed the Course on Basic Concepts of Deep Learning from 12.6.17 to 17.6.17
	Course Coordinator Hod PRINCIPAL M.I.E.T. ENGINEERING COLLEGE GUNDUR, TIRUCHIRAPPALLI-620 007.



(Approved by AICTE, New Delhi, Affiliated to Anna University, Chennal)
TRICHY - PUDUKKOTTAI ROAD, TIRUCHIRAPPALLI - 620 007.
Email: principalengg@miet.edu, contact@miet.edu
Website: - www.miet.edu

Ph: 0431 - 2660 303

Date: 4.12.2017

To

The Principal
M.I.E.T Engineering College,
Trichy – 620007

Respected Madam,

Sub: Permission to conduct the certificate program – Reg...

We have planned to conduct the certificate program for our second year CSE students from 11-12-2017 to 16-12-2017.

Name of the Certificate Program	Course Coordinator
Fundamentals of Data Science	Mr.A.Joshua Issac., AP/CSE and Mr. P.Manikandan., AP/CSE

So kindly give us permission to conduct the course and to utilize the class room and lab.

Thanking you

Course Coordinator

Had/CSE



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TRICHY - PUDUKKOTTAI ROAD, TIRUCHIRAPPALLI - 620 007.
Email: principalengg@miet.edu, contact@miet.edu
Website: - www.miet.edu

Ph: 0431 - 2660 303

6.12.2017

CIRCULAR

Sub: Certificate Program

It is planned to conduct the Certificate Program for the second year Computer Science and Engineering students.

The Certificate Programs are short term certificate courses which are designed and offered by our department for the benefit of our students. Certificate Program will be conducted at free of cost and based on the performance of the participated students, the merit certificate will be issued after the successful completion of the course.

Students those who are willing to attend the below mentioned course can enroll their name to the course coordinator.

Name of the Certificate Program	Course Coordinator
Fundamentals of Data Science	Mr.A.Joshua Issac., AP/CSE and Mr. P.Manikandan., AP/CSE
Commencement of course	from 11-12-17 to 16-12-17
Time: 9.00 A	M – 5.30 PM

Course Coordinator

IQAC Coordinator

HoD/CSE

M.I.E.T ENGINEERING COLLEGE, TRICHY - 7.

DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING

Certificate Program (II Year – IV Semester)

Course Syllabus

Name of the course: Fundamentals of Data Science

Course Code: CS17182

Course Coordinator: Mr.A.Joshua Issac, AP/CSE & Mr.P.Manikandan., AF/CSE

Total Hours: 35 Academic Year: 2017-2018

Objective

• Demonstrate knowledge of statistical data analysis techniques, utilized in business decision making and apply principles of Data Science to the analysis of problems.

UNIT I -INTRODUCTION TO R PROGRAMMING

5

Data science for engineers- Course philosophy and expectation-Introduction to R- Variables and data types in R-Data frames-Recasting and joining of data frames.

UNIT II-OPERATIONS & FUNCTIONS

7

Arithmetic, Logical and Matrix operations in R-Advanced programming in R - Functions- -Control structures-Data visualization in R Basic graphics.

UNIT III -LINEAR ALGEBRA FOR DATA SCIENCE

7

Linear Algebra for Data science-Solving Linear Equations-Solving Linear Equations Linear Algebra – Distance-Hyper planes and Halfspaces-Eigen values-Eigen vectors.

UNIT IV -STATISTICAL MODELLING

8

Statistical Modelling-Random Variables and Probability Mass/Density Functions-Sample Statistics-Hypotheses Testing.

UNIT V - MULTIVARIATE OPTIMIZATION

8

Optimization for Data Science-Unconstrained Multivariate Optimization- -Gradient (Steepest) Descent (or) Learning Rule.

Course Outcomes

The students will be able to

- Demonstrate proficiency with statistical analysis of data.
- · Build and assess data-based models.

References

Link to refer Data Science:

- A Hands-On Introduction to Data Science books.google.co.in > books Chirag Shah · 2020
- Data Science with Python and Dask books.google.co.in books Jesse Daniel
- The Data Science Handbook books.google.co.in books_Field Cady

Course Coordinator



(Approved by AICTE, New Delhi, Affiliated to Anna University, Chennai)
TRICHY - PUDUKKOTTAI ROAD, TIRUCHIRAPPALLI - 620 007.
Email: principalengg@miet.edu, contact@miet.edu
Website: - www.miet.edu

· 単新: 0431 - 2660 303

Certificate Program (II Year-IV Semester)

Course Delivery

Name of the Course: Fundamentals of Data Science

Course Code: CS17182

Course Coordinator: Mr.A.Joshua Issac., AP/CSE and Mr. P.Manikandan., AP/CSE

Total Hours: 35

Academic Year: 2017-2018

Sl.No	Topics to be Covered	Hours	Date of Delivery
1.	Data science for engineers	1	
2.	Course philosophy and expectation	1	
3.	Introduction to R	1	
4.	Variables and data types in R-Data frames	1 ·	11-12-2017
5.	Recasting and joining of data frames	2	
6.	Arithmetic, Logical and Matrix operations in R	1	2
7.	Advanced programming in R	2	
8.	Functions	2	
9.	Control structures	2	12-12-2017
10.	Data visualization in R Basic graphics	1	
11.	Linear Algebra for Data science	2	
12.	Solving Linear Equations	1	
13.	Linear Algebra	1	13-12-2017
14.	Distance-Hyper planes and Halfspaces	2.	
15.	Eigen values	1	
16.	Eigen vectors	1	
17.	Statistical Modelling	2	14-12-2017
18.	Random Variables and Probability Mass/Densit	2	

Sl.No	Topics to be Covered	Hours	Date of Delivery
18.	Random Variables and Probability Mass/Densit Functions	2	2 19
19.	Sample Statistics	2	
20.	Hypotheses Testing	1	*
21.	Optimization for Data Science	2	1
22.	Unconstrained Multivariate Optimization	2	15-12-2017
23.	Gradient (Steepest) Descent (or) Learning Rule	2	
	Total Hrs		35 Hrs
24.	Revision	2	T
25.	Test	1	16-12-2017

2 Course Coordinator

HoD/CSE



(Approved by AICTE, New Delhi, Affiliated to Anna University, Chennai)
TRICHY – PUDUKKOTTAI ROAD, TIRUCHIRAPPALLI – 620 007.
Email: principalengg@miet.edu, contact@miet.edu
Website: - www.miet.edu

Ph: 0431 - 2660 303

Resource Person Details

Title of the program	Fundamentals of Data Science
Course Code	CS17182
Duration and timing of the program	35 Hrs, 9:00 AM to 5:30 PM
Name of the resource person	Mr. A.Joshua Issac
Photo of the resource person	
Email address	Joshvaissaac.a@miet.edu
Contact number	9952760927
Designation	Assistant Professor
Educational qualification	 Completed B.E., Computer Science and Engineering from Oxford Engineering College in the year 2011. Completed M.E., Computer Science and Engineering from Oxford Engineering College in the year 2013.
Experience	Teaching Experience – 4 Years.



(Approved by AICTE, New Delhi, Affiliated to Anna University, Chennai)
TRICHY – PUDUKKOTTAI ROAD, TIRUCHIRAPPALLI – 620 007.
Email: principalengg@miet.edu, contact@miet.edu
Website: - www.miet.edu

Ph: 0431 - 2660 303

Resource Person Details

Title of the program	Fundamentals of Data Science
Course Code	CS17182
Duration and timing of the program	35 Hrs, 9:00 AM to 5:30 PM
Name of the resource person	Mr.P.Manikandan, AP/CSE
Photo of the resource person	
Email address	manikandan.p@miet.edu
Contact number	9626383409
Designation	Assistant Professor
Educational qualification	 Completed B.E., Computer Science and Engineering from M.I.E.T Engineering College in the year 2007. Completed M.E., Computer Science and Engineering from M.I.E.T Engineering College in the year 2013.
Experience	Teaching Experience – 4 Years.





(Approved by AICTE, New Delhi, Affiliated to Anna University, Chennai)
TRICHY - PUDUKKOTTAI ROAD, TIRUCHIRAPPALLI - 620 007.
Email: principalengg@miet.edu, contact@miet.edu
Website: - www.miet.edu

Ph: 0431 - 2660 303

Certificate Course (II Year–IV Semester) Attendance Sheet

Name of the course: Fundamentals of Data Science

Course code: CS17182

Course coordinator: Mr.A.Joshua Issac., AP/CSE and Mr. P.Manikandan., AP/CSE

Academic Year: 2017-2018

SL:NO	ROLL NO	STUDENT NAME	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
1.	E1165001	Ahamed Younus Khan. M	1	1	1	1	1.	1	7	1	1	1	1	1	(.]	a	. a	a	<u>٠</u>	a	a
2.	E1165002	Akilan. P	1	1	1	1	1	1	1	1	1	1	1	1	1	1	/	1	/	ſ	1	1
3.	E1165004	Amrutam Sunil. S	1	1	C	1	1	1	1	1	1	1	1	1	1	1	1	,		1	1	1
4.	E1165007	Anusiya Devi. S	1	1	1	1	1	1	1	1	1	1	1	1	/	1	1	1	/	^	1	1
5.	E1165008	Aravindhan. R	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1		1	/
6.	E1165009	Arif Mohammed. M	a	a	Q-	a	a	a	a	1	1	-/	1	1	1	1	1	1			1	1
7.	E1165010	Aswathi. S	1	1	1	1	'n	1	ı	1	1	1	F		/	/	-(-	1		1	,	1
8.	E1165011	Ayesha Shereen. A.K	Z	1	1	1	1		1		1	1	1	1		1	-	1	1	,	$\overline{}$	1
9.	E1165012	Daaneshwaran. R	0	1	1	1	1	1	/	a	a	a	a	oc	a	0		1	1	/	1	1
10.	E1165014	Farjana Fathima, S	1	1	W	1	1	1			1	1	1	1		7	-	,	(.	7	1	1

SL.NO	ROLL NO	STUDENT NAME	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
11.	E1165015	Gayathri. S	Ø	d	7	1	1	1	1	11	1	1	/	/	1	1	1	1	1	1	1	1
12.	E1165016	Gomathi. K	1	1	-	(1	1	1	1		1	1	1	1	1	1	1	1	1	1	1
13.	E1165017	Hajara Bathool. A	1	1	(1	0	1	1	1	1	1	1	1	1	/	1	1	1	(1	1
14.	E1165018	Hephzibah. P	1	1	1	1	1	1	1	1	1	1	1	1	1	/	1	((1	1	1
15.	E1165019	Ibrahim Umarkhan. T	1	1	1	1	1	1	0	1	1	/	1	1	1	/	1	1	1		1	1
16.	E1165021	Jerophine Santhiya. S	1	1	1	1	6	1	1	1	1	1	1	1	_	1	-(-	,	7	1	1	1
17.	E1165022	Kabil. R	a	OL.	OL.	a	a	a	a	1	1	/	/	/	1	1	1	1	1	1	1	1
18.	E1165024	Karishma. R	1	1	1	/	1	1	1	1	1	1	1	1	1		1	1	1	1		/
19.	E1165026	Kaviya. A	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	/	-	1
20.	E1165027	Lamya Bhanu. T	1.	1	1	<i>f</i>	1	1	1	1	1	1	1	-			1	1			1	1
21.	E1165028	Lavanyaa, N	1	1	/	1	1	1	ĵ	1	1	1	1	1	/	1	/	1			1	1
22.	E1165029	Manikandan. S	1	1	1	1.	1	1	1	a	a	0	a	0-	a	0-	/	_	1	/	1	1
23.	E1165030	Meghasushmitha. J		^	1	1	/	1	7	1			1	1	/	1	1	1	1	1		^
24.	E1165031	Mohamed Asik. M				7	,	1	1	1	1	1	1	1	/	/		,	1	1	1	1
25.	E1165032	Mohamed Bilal. K	J	(-		/	,	/	1	1	1	1	1					1	1	-)_	1	1
26.	E1165034	Mohamed Munaf. M	1	,	/	1	1	1	/	1	/	/	<i>j</i>	/	/	1	9	a	0	a	a	<u>a</u>
27.	E1165035	Mohamed Muzammil. M	1.	1	1	1	/	//	,	/	1	1	1	1	1	/	9	(1	1	(-	1

SL.NO	ROLL NO	STUDENT NAME	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
28.	E1165036	Mohammad Saifullah. A	1	ſ	1	./	/	1	1	1	1	1	1	-/	1	1.	1	(1	1	/	1
29.	E1165037	Mohammed Ansar. S	a	a	α	a	a	a	a	1	1	1	1	/	^	1	1	1	1	1	1	1
30.	E1165038	Nichol Raj. R	1	1	1	1	1	1	1	1	1	1	1	1	1	1	(/	1	1	1	1
31.	E1165040	Nivetha. R	1	1	1	1	1	1	1	1	1	1	1	1	1	/	1	1	1	1		1
32.	E1165041	Nivetha. S	1	1	(r	((1	1	1	1		1	1	1	1	1	((1	1
33.	E1165042	Nivethini. L	1	1	1	1	1	1	1	/	1	1	1	1	1	1	1	1	1	1	-	1
34.	E1165043	Nizar Ahamed. H	1	5	1	1	,	1	1	0	a	a	a	a	a	a	1	1	1	1	1	1
35.	E1165044	Noorul Vaisha Parveen. M	1	/	1	1	1	1	1	/	(1	1	/	1	1	1	1	· op	1		1
36.	E1165047	Prasana. V	/	/	1	1	1	/	1	^	^	1	1	1	1	1	a.	a	a	0	0,	٥
37.	E1165048	Prem. R	(1	1	1	1		1	^	1	1	1			1	1	1	1		1	1
38.	E1165049	Priya. M	1	/	7	1	1	1		1	, /	1		1	-	1	1	1	1	1	1	1
39.	E1165050	Priyanka. A	1	/	1	7		7	1	, _	1	1		1	1	j	1	1			- /	/
40.	E1165051	Raja, S	1	1	1	1	1	1	1		1	1	1	1	1	1	1	/	,		1	1
41.	E1165053	Ramela. R	1	,	1	7	1	,	/	1	1	/	1	/		1	1	1	1	1	1	1
42.	E1165054	Ramya. G	1	1	1	1	/	1		1	1	1	1	1	1	1	1	1		,	7	1
43.	E1165055	Ramya. V		1	1	1	/	1	1	-	1	1	^	1	1	1	1	1	1	1	1	1

3

SL.NO	ROLL NO	STUDENT NAME	1	2	3.	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
44.	E1165057	Revathi. M	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
45.	E1165058	Riyaz Ahmed. H	1	1	1	1	1	1	/	1	1	1	1	1	1	1	1	1	1	1	(1
46.	E1165059	Robika. S	1	1	1	(1	1	1	1	(1	1	1	/	1	1	1	1	1	1	1
47.	E1165060	Rumana Fervin. A	1	/	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
48.	E1165061	Sabur Khan, S	1	1	1	1	1	1	1	a	a	a	a	a	a	a		1	1	1	1	1
49.	E1165062	Sagunthala. R	1	1	1	ſ	1	0	1	1	(1	(1	ſ	1	1	1	1	1	1	1
50.	E1165063	Sameer Khan. N	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
51.	E1165064	Shabi Ahmed. S	1	1	1	1	1	1	1	1	1	1	1	(1	1	~	1	/	/	1	1
52.	E1165065	Shabira Begam. R	1	1	(1	1	1	1	1	1	1	1	1		1	1	1	1		1	1
53.	E1165066	Shajeetha Parveen. J	1	1	1	1		1	1	((16	(/	1	1	1	1	-	/	1	1
54.	E1165067	Shameena Arasi. S	1	1	1	7	1	/	1	1	1	<i>(</i> .	/	1	-	1	1	1	1	1	1	1
55.	E1165068	Shyamsundar. T	a	a	a	a	a	a	a	1	/	1	1	1	/	1	1	1	ţ	/	(
56.	E1165069	Sibiya Nilosha. A	1	1	1	/	1	1	1	1	1	1	1	1	(1	1	1	1	1	1	1
57.	E1165070	Sivagami, K	1	1	ſ	1	1	1	1	^	1	1	^	1	1	1	(1		1		^
58.	E1165071	Soundharya. S	1	1	1	/	1	1	1	1	1	1	1	1	1	1	1	1	1	/	(1
59.	E1165072	Subashchandrabose. M	/	1	1	1	1	1	1	1	1	1	/	-/		1	1	1	/	/	/	_
60.	E1165073	Subash. N	1	1	1	1	/		1	1	/	1	1	1	1	1	a	a	a	a	a	a
61.	E1165074	Subasree, M.V	1	1	1	1	1	1	1		1	1	1	/	1	1	1	1	(1	1

CI NO	ROLL	OTHER PAIGE ALANCE	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
SL.NO	NO.	STUDENT NAME								1	1	1	1	1	/	1	1	1	/	1	1	1
62.	E1165075	Sumathradevi. K	1	1	1	/	1	(1	1	1	1	1	1	1	/	/	/	1	1	1	/
63.	E1165076	Uma Shankar. G	1	1	1	(1	1	/	1	1	1	1	1	1		1	1	1	1	1	1
64.	E1165077	Ummal Bajria. A	/	1	1.	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	/	1
65.	E1165078	Vasanth. S	1	1	1	1	(1	1	/	ſ		1	(1	1	1	1	. ((1	1
66.	E1165082	Zaina Zuhaina. M	1	1	1	/	/	1	1	1	-	1	1	1	1	1	1	1	1	1	1	1
67.	E2175083	Elangovan. S	1	7	1	./	1	/	1	(1	1	1	1	1	1	1	(1	1	1	1
68.	E2175084	Roshini. A	1	/	1	1	1	1	1	1	<u> </u>	^	1	1	1	1	,	,		1	,	1
69.	E2175085	Sathish Kumar. S	1	1	1	1	1	/	/	a	a	a	a	a	a	a	/	1	1	1	1	-
70.	E2175086	Subha. E	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	(-	1	1	1	1

SL.N O	ROLL NO	STUDENT NAME	21	22	23	24	24	25	26	27	28	29	30	31	32	33	34	35	R&T
1.	E1165001	Ahamed Younus Khan. M	a	1	1	1	/	/	1	1	1	a	a	a	a	a	a	a	1
2.	E1165002	Akilan. P	1	/	1	(1		1	1	1	,		1	1	1	1	-1	
3.	E1165004	Amrutam Sunil. S	1	(1	(1	1	1	1	7	7	r	1		1	(1
4.	E1165007	Anusiya Devi. S	1	/		((1	1	1	0		1	1	t	1	1	1

SL.N O	ROLL NO	STUDENT NAME	21	22	23	24	24	25	26	27	28	29	30	31	32	33	34	35	R&T
5.	E1165008	Aravindhan. R	/	1	7	1	_	1	1	1	1	1	1	1			/	1	1
6.	E1165009	Arif Mohammed. M		(1	P	1	1	_	1	1	1	-	6	,	(/	1	1
7.	E1165010	Aswathi. S		(1	1	1	1	1	1	1	((1	1	1	1	1	1
8.	E1165011	Ayesha Shereen, A.K	/	1	1	٩	1	1	1	(1	1	1	1	1	^	1	1	1
9.	E1165012	Daaneshwaran. R				1	1	1	1	1	1	_	1	1	1	1	1	1	/
10.	E1165014	Farjana Fathima. S	1	1	1	(0	1	(1	1	1	1	1		1	1	1	1
11.	E1165015	Gayathri. S	1	1	1	1	1	-/	1		1	1	6	1	_	1	1	1	/
12.	E1165016	Gomathi. K	ſ	1	((~	(1	(1		1		(1	1	/
13.	E1165017	Hajara Bathool. A	1	1	0	1	1	1	1		1	1	1	1	1	1	1	1	/
14.	E1165018	Hephzibah. P	1	1	1	1	1	1	1	1	1	1	5	1	1	1	7		1
15.	E1165019	Ibrahim Umarkhan, T	1	à	a	0	a	a	a	a	a	1	-	1	1		1	1	/
16.	E1165021	Jerophine Santhiya. S	ſ	(1	1	1	1	1	/	1	1	1	1		1	,	/	1
17.	E1165022	Kabil. R	- /	(,	1	1	(/	(1	1	1				/
18.	E1165024	Karishma. R	1	<i>[</i>	1	(((1	1	/	1	1	1	<u></u>	1		7	/
19.	E1165026	Kaviya. A	1	(1	1		1		1	1	1	9	1	1		/	/
20.	E1165027	Lamya Bhanu. T	- 1		1		/	^	7	1	1	1	1	1	1		7	1	1
21.	E1165028	Lavanyaa. N	1	1	1	1	6	1	-/		1			ſ	7		,	1	1

SL.N	ROLL NO	STUDENT NAME	21	22	23	24	24	25	26	27	28	29	30	31	32	33	34	35	R&T
22.	E1165029	Manikandan. S		,	1	2	1	1		J	,	,	_		,			,	/
23.	E1165030	Meghasushmitha. J	1		1	1	(,	/	/	/	1	_/_			/	/	/
24.	E1165031	Mohamed Asik. M	1	a	a	cu .	a	a	/ a	a	a		1	1	1	/	/	1	-
25.	E1165032	Mohamed Bilal. K	1	1	/	1	1	1	1	1	1		/	/	1	1		/	
26.	E1165034	Mohamed Munaf. M	a	1	1	1	1	1	/	1	1	1	1	1	7	/	1	/	/
27.	E1165035	Mohamed Muzammil. M	1	\vdash	1	7	1	6		7	1	1	1	1		-/	,	1	/
28.	E1165036	Mohammad Saifullah. A	1	C	1	1	,	_		1				1			/	1	1
29.	E1165037	Mohammed Ansar. S	1	1	1	1	1	1	1	1		1	1	1	1	1		/	1
30.	E1165038	Nichol Raj. R	1	1	1	(1	C	1	(1	_	/	1		-	/	1	1
31.	E1165040	Nivetha, R	1	/	(1	1	1	1	1	1	1	1	1	1	/	1	1	1
32.	E1165041	Nivetha. S	1	(0	1	1	1	1	1	(1	1	1	1	1	1		1
33.	E1165042	Nivethini. L	1	1	1	(1	1	/	1	1	1	1	,	-1	1	1	,	1
34.	E1165043	Nizar Ahamed. H	1	1	7	1	1	1	^	ſ·	1	1	(/	1	7	1	1	1
35.	E1165044	Noorul Vaisha Parveen. M	(7	ſ	1	/		(1	^	1	(1		1	1	./	1
36.	E1165047	Prasana. V	a	1	1	1	0	1	1	1	/	/	,	,	/	1	1	7	1
37.	E1165048	Prem. R	/	1	1	^	1	1	1	1	1	/	/	/	1	,	1	-/	
38.	E1165049	Priya. M	1	p	(1	1	1	1	1	7	1	1	1	1	1.	1	

SL.N O	ROLL NO	STUDENT NAME	21	22	23	24	24	25	26	27	28	29	30	31	32	33	34	35	R&T
								18			1								/
39.	E1165050	Priyanka. A	1	1	1	1	1	1	ĺſſ	/	1	1	1	1	1	/	1	/	/
40.	E1165051	Raja. S	1	1	(1	1	1	(/	5	1	_	-	1	1	,	1	1
41.	E1165053	Ramela, R	1	(T	1	1	1	1	1	1	1	1	·	1		1	_	
42.	E1165054	Ramya. G	1	- /	1	1	1	1	1	1	1	_		6	_	1	1	1	/
43.	E1165055	Ramya. V	1	1	1	1	p	1	,	1	^	1	1	1		1	/	1	1
44.	E1165057	Revathi. M	1	1	1	1	1	1	1	1	1		,	1	1	/	1	_	
45.	E1165058	Riyaz Ahmed. H	1	a	a	a	a	a	0	a	a			1	,	-/			-
46.	E1165059	Robika. S	1	1	1	1	1	1	1	1	(_	- /	/	1	1	1	/
47.	E1165060	Rumana Fervin. A	1	1	1	1	1	1	1	1	,	(,	1	_	/	,	1	/
48.	E1165061	Sabur Khan. S	1	1	1	1	-(1	1		7	1	_	/	1	1	1	/	^	1
49.	E1165062	Sagunthala. R	1	7	1	1	1	1		1	1		_	1					/
50.	E1165063	Sameer Khan. N	1	1	1	r	1	ſ	1	T	9			1	1	/		1	
51.	E1165064	Shabi Ahmed. S	1	-	1	1	7	1	1	1	/	1		_		1	1	/	1
52.	E1165065	Shabira Begam. R	1	1	1	1	1	,	1	1	1		,	1		1	1	/	
53.	E1165066	Shajeetha Parveen. J	7		1	1		<i>i</i>	r'	1	1		/	,	1	-	1	1	/
54.	E1165067	Shameena Arasi. S	1	1	p			1	1		/	/		/	/	1	1	_	
55.	E1165068	Shyamsundar. T	/	(1	1	1		<i>r</i>	1	1	1		,	1	/	/	/	/

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SL.N	ROLL	STUDENT NAME	21	22	23	24	24	25	26	27	28	29	30	31	32	33	34	35	R&T
O	NO.	STODENT NAME				-													1
56.	E1165069	Sibiya Nilosha. A	1	/	/	1	1	/	1	1	1		1	1	1	1	1	1	/
57.	E1165070	Sivagami. K	1	1		1	1	1	1	1	1	1	1	1	1	/	/	/	1
58.	E1165071	Soundharya. S	1	. (1	1	1	1	1	1	1	1	1	1	1	/	1	1	/
59.	E1165072	Subashchandrabose. M	1	. \	1	(0	1	1	1	1	1	1	1	1	1	/	1	/
60.	E1165073	Subash. N	a	a	a	0-	a	a	Q	مر	a_		1	1	1	1	/	1	/
61.	E1165074	Subasree, M.V	1	1	(0	(1		1		1	/	1	1	/	1	1	1
62.	E1165075	Sumathradevi. K	1	^	1	1	1	ſ	1	1	1	1	1		1	1	1	1	/
63.	E1165076	Uma Shankar. G	1	1	(1	^	1	1	1	1	_	1	1	1	/	1	1	/
64.	E1165077	Ummal Bajria. A	1	1	*	1	1	1	1	1	^	^	1	1			1	1	/
65.	E1165078	Vasanth. S	1	1	(-	1	1	1	1	1	1	1	1	1	1	1	1	/
66.	E1165082	Zaina Zuhaina. M	<i>^</i>	. /	^	+	1	1	1	1	1.		1	1	1		1	1	1
67.	E2175083	Elangovan. S	1	((1	1	1			1	1	1	1	1	1	1	1	1
68.	E2175084	Roshini. A	(1	1	1	1	1	<i>'</i>	1	_	1	-	(1	1	1
69.	E2175085	Sathish Kumar. S	1	./	1	. [-/-	1	,	ſ	1	/	1		1	1	1	1	1
700	E2175086	Subha. E	1	1	1	1	1	1	1	/	1	1	1	_				/	1

2 Course Coordinator

HoD/CSE

Principal

9



(Approved by AICTE, New Delhi, Affiliated to Anna University, Chennai)
TRICHY - PUDUKKOTTAI ROAD, TIRUCHIRAPPALLI - 620 007.
Email: principalengg@miet.edu, contact@miet.edu
Website: - www.miet.edu

Ph: 0431 - 2660 303

Certificate Program Assessment Test

Name of the course: Fundamentals of Data Science

Course Code: CS17182 Academic Year: 2017-2018 Date: 16-12-17 Time: 1:00 hr

Total Marks: 40

Part A (2 marks * 20 = 40 marks)

1) The value of "x" after running the code given below is ----

- 9025
- ⊕ True
- 9211
- 6325

2) The last value of sum and month printed is ----

```
n=5
        sum=0
        for(i in 1:11) {
                 sum=sum+(i^3)
                 if (i %% 2 !=0)
                      next
                 print(c(month.abb[i+2],sum))
  O "Oct" "2025"
  © "Sep" "1296"
  ○ "Nov" "3025"
3.
  The value(s) of "y" at the end of the program given below is--
       x1=matrix(10:18,3,3)
       x2=matrix(11:19,3,3)
       m =cbind(apply(x1,1,min),apply(x2,1,max))
       print(m)
       y =apply(m,2,mean)
       print(y)
  J 11 18
  30 20 40
 13.5 14.5 15.5
 2 12
```

4) In the R code given below, the value of "i" at which the loop breaks is ---

5.

351525

What will be the output of the code given below

$$x = c(3:8)$$

 $y = c(2,4,5)$
 $x * y$

- Error!
- 0 6 16 18 12
- © 6 16 25 12 28 40
- 961688

6.

Data science is the process of diverse set of data through?

- A. organizing data
- B. processing data
- C. analysing data
- D. All of the above

7.

Which of the following language is used in Data science?

- A. C
- B. C++
- C. R
- D. Ruby

8.

The modern conception of data science as an independent discipline is sometimes attributed to?

- A. William S.
- B. John McCarthy
- C. Arthur Samuel
- D. Satoshi Nakamoto

9.

What is the work of Data Architect?

- A. utilize large data sets to gather information that meets their company's needs
- B. work with businesses to determine the best usage of the information yielded from data
- C. build data solutions that are optimized for performance and design applications
- D. All of the above

10.

Which of the following are correct component for data science?

- A. Data Engineering
- B. Advanced Computing
- C. Domain expertise
- D. All of the above

11.

Which of the following is not a part of data science process?

- A. Discovery
- B. Model Planning
- C. Communication Building
- D. Operationalize

Which of the following are the Data Sources in data science?

- A. Structured
- B. UnStructured
- C. Both A and B
- D. None Of the above

13.

Which of the following is not a application for data science?

- A. Recommendation Systems
- B. Image & Speech Recognition
- C. Online Price Comparison
- D. Privacy Checker

14.

Raw data should be processed only one time.

- A. True
- B. False
- C. Can be true or false
- D. Can not say

15.

Which of the following is the common goal of statistical modelling?

- A. Inference
- B. Summarizing
- C. Subsetting
- D. None of the above

16.

Causal analysis is commonly applied to census data.

- A. True
 - B. False
 - C. Can be true or false
 - D. Can not say



17.

Which of the following is a revision control system?

- A. Git
- B. Numpy
- C. Scipy
- D. Slidify

18.

Which of the following model is usually a gold standard for data analysis?

- A. Inferential
- B. Descriptive
- C. Causal
- D. All of the above

19.

What will be the output of the code given below

$$x = c(3:8)$$

 $y = c(2,4,5)$
 $x * y$

- Error!
- 9 6 16 18 12
- 0 6 16 25 12 28 40
- 061688

The output displayed on running the code given below is

runif(100)

- Random numbers between -1 and 1
- 100 random real numbers
- O Generates 100 uniform random numbers between 0 and 1
- O None of the above

2. Course Coordinator

HOD/CSE



(Approved by AICTE, New Delhi, Affiliated to Anna University, Chennai)
TRICHY - PUDUKKOTTAI ROAD, TIRUCHIRAPPALLI - 620 007.
Email: principalengg@miet.edu, contact@miet.edu
Website: - www.miet.edu

Ph: 0431 - 2660 303

One Page Report

Name of the course: Fundamentals of Data Science

Course Code: CS17182

Course Coordinator: Mr.A.Joshua Issac., AP/CSE and Mr. P.Manikandan., AP/CSE

Total Hours: 35 Academic Year: 2017-2018

I hereby affirm that the entire course contents listed in the course syllabus of the certificate program "Fundamentals of Data Science" have educated to the students as the part of the prescribed co – curricular activities through certificate program.

They have been given the major concepts of the topics mentioned and students clearly understood the basics of Data Science.

I confirmed that the certificate program titled as "Fundamentals of Data Science" has been conducted in the beginning of the semester and course delivery along with attendance of the students was recorded.

I confirmed that all the students were actively attended this certificate program and performed well throughout the program and eligible students received the certificate.

2_

Course Coordinator

HdD/CSE

	MILET ENGINEERING COLLEGE STATE
	Trichy, Pudukkottai Road, Trichy - 620 007. Course Completion Certificate Course Completion Certificate
	INSTITUTIONS Since 1984
	This is to Certify that MF/Ms. C. Farjana Fathima
	of IT YY CSF has Completed the Course on
Zien)	Fundamentals of Data Science from 11.12.17 to 16.12.17
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	Course Coordinator Hod Principal Principal Principal
	PRINCIPAL M.I.E.T. ENGINEERING COLLEGE GUNDUR, TIRUCHIRAPPALLI-620 007.

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	WILET ENGINEERING COLLEGE STORY
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	INSTITUTIONS Since 1984
	This is to Certify that Ar/Ms. P. Hephzibah
	of IT yr CSE has Completed the Course on Fundamentals g Oata Science from 11.12.17 to 16.12.17
	Fundamentals g Data Science from 11.12.17 to 16.12.17
	Course Coordinator Tod PRINCIPAL M.I.E.T. ENGINEERING COLLEGE GUNDUR, TIRUCHIRAPPALLI-620 007.
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Trichy, Pudukkottai Road, Trichy - 620 007.
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This is to Certify that Mr/Ns. A. Mohamed Saifullah of TI uv CCF has Completed the Course on
of II yr CSE has Completed the Course on Fundamentals g Data Science from 11.12.17 to 16.12.17
Course Coordinator Hod A-M. Principal To
PRINCIPAL M.I.E.T. ENGINEERING COLLEGE GUNDUR, TIRUCHIRAPPALLI-620 007.

	W.I.E.T. ENGINEERING COLLEGE ST.
	Trichy, Pudukkottal Read, Trichy - 620 007. Course Completion Certificate
	INSTITUTIONS Since 1981
	This is to Certify that Mr/ Ms . S. Vasanth.
シーニットへ	of II yr CSF has Completed the Course on
	Fundamentals of Data Science from 11.12.17 to 16.12.17
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いると	M.I.E.T. ENGINEERING COLLEGE GUNDUR, TIRUCHIRAPPALLI-620 007

Trichy, Pudukkottai Read, Trichy - 620 007.	
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INSTITUTIONS Since 1984	
This is to Certify that Mr/Ms. E. Subha	
of Tyr CSE has Completed the Course on Fundamentals of Data Science from 11.12.17 to 16.12.17	
Course Coordinator Glod A. Principal Vision	
PRINCIPAL M.I.E.T. ENGINEERING COLLEGE GUNDUR, TIRUCHIRAPPALLI-620 007	