(Approved by AICTE, Permanently Affiliated to JNT University Kakinada, Accredited by NAAC and Recognized under 2(f) &12 (b) by UGC, New Delhi) Tamaram, Makavarapalem, Narsipatnam (RD), Visakhapatnam-531113



Certificate Course on DATA SCIENCE WORKFLOW AND TOOLS from 4th November 2019 to 9th November 2019



ORGANIZED BY DEPT. OF COMPUTER SCIENCE ENGINEERING AVANTHI INSTITUTE OF ENGINEERING AND TECHNOLOGY, MAKAVARAPALEM (V), VISAKHAPATNAM-531113

AVANTHI INSTITUTE OF ENGINEERING & TECHNOLOGY

AIET started in the year 1999 and offers various courses at Engineering and PG level. The college is providing with rooms, computer centre, laboratories and seminar hall with audio-visual equipments. Industry Institute interaction is conducted regularly to emphasize on the latest trends in the present market.



It is very near to Narsipatnam. Frequent bus facilities are available both from and to Visakhapatnam and Narsipatnam. Very safe and secure hostel facility is available for Girl students. These are the additional facilities besides excellent academic atmosphere in the college campus.

DEPARTMENT OF COMPUTER SCIENCE ENGINEERING

The Computer Science & Engineering department was established with B.Tech Program in 1999 with intake of 60 students and this was increased to 120 students in 2007 and increased to 180 students in 2012. The Post graduate Program M.Tech with C.S.E was started in 2005 with intake of 18 Students and this was increased to 24 students in 2012. The Computer Science & Engineering department was accredited by NBA in 2009 and 2014. Department mission is to be Instrumental in the field of computer science & engineering by providing high quality education and continues improvement process of the program. The department has full fledged faculty with four professors with Ph.D and 40 staff members with experience in teaching and industry, which leads the skill students to get employment in the market. The department encourages the faculty members and the students to participate paper presentations, seminars, workshops and National, International conferences and research activities. The department is well equipped laboratories and the computers have sophisticated development software tools. The department provides training to its students in advanced technologies like JAVA, WEB TECHNOLOGIES,.NET, PHP, Data Warehousing, Data Mining tools and Data storage systems as a supplement to the curriculum to enhance the employability of students. Our faculty members are the members of Computer Society of India, ISTE, IEEE.

ABOUT COURSE

Data scientist is one of the best suited professions to thrive this century. It is digital, programming-oriented, and analytical. Therefore, it comes as no surprise that the demand for data scientists has been surging in the job marketplace.

However, supply has been very limited. It is difficult to acquire the skills necessary to be hired as a data scientist dedicated to developing novel data science theories, algorithms, and methods to solve challenging problems in business and society. The conference provides a venue for innovative data science studies that solve business and societal problems from the lens of data mining and machine learning, ranging from marketing and finance problems to health care, cyber security, and social network problems. Studies on theoretical and methodological foundations to data science, such as optimization for machine learning and new algorithms for data mining, are also welcome.

TOPICS TO BE COVERED

- Day 1 Introduction to Data Science
- Day 2 Machine Learning
- Day 3 Algorithms used in Machine Learning
- Day 4 Statistical Foundations for Data Science
- Day 5 Scientific Computing
- Day 6 Optimization Techniques

For Registration please contact Mr. S.V.R.Vara Prasad, Assistant Professor, CSE.

CHIEF PATRON

Smt. M. Gnaneswari President Avanthi Institute of Engineering and Technology PATRON Dr. C P V N J Mohan Rao Principal, Avanthi Institute Of Engineering and Technology

CHAIRMAN

P.M.Manohar Head of the Department Computer Science & Engineering



(Approved by AICTE, Permanently Affiliated to JNT University Kakinada, Accredited by NAAC and Recognized under 2(f) &12 (b) by UGC, New Delhi) Tamaram, Makavarapalem, Narsipatnam (RD), Visakhapatnam-531113

Dt: 28-10- 2019.

<u>CIRCULAR</u>

On behalf of the Department of Computer Science and Engineering AIET is conducting one week certificate course on "Data Science Workflow and Tools" during 4th November 2019 to 9th November 2019 for all the students of II & IV Year of Computer Science and Engineering Department.I advise to all the students of II & IV Year CSE to enroll your details for above course. For more details you may contact course Coordinator Mr.S.V.R.Varaprasad, Assistant Professor, CSE.

Resource Person 1: Dr.S.Jhansi Rani

Assistant Professor A.U,Visakhapatnam 2: Dr.G.Sowjanya

Professor

Information Technology, JNTUV.

P.M.Manohar

Head of the Department Computer Science and Engineering

Avanthi Institute of Engg. & Technology Tamaram, Makavarapalem Md., Visakhapatnam Disuict, PIN-531113

Copy to: Principal, AIET



(Approved by AICTE, Permanently Affiliated to JNT University Kakinada, Accredited by NAAC and Recognized under 2(f) &12 (b) by UGC, New Delhi) Tamaram, Makavarapalem, Narsipatnam (RD), Visakhapatnam-531113

Data Science work flow and tools

Duration: 4th Nov 2019 to 9th Nov 2019

SYLLABUS

- **DAY 1** : Introduction to data science in Python
- DAY 2 : Introduction to Machine learning
- DAY 3 : Introduction to Algorithms, Algorithms used in Machine learning
- DAY : Statistical Foundations for D.S
- DAY 5 : Scientific Computing
- DAY 6 : Optimization Techniques

S.V.R.Varaprasad Coordinator

P.M.Manohar

Head of the Department

Avammiliersticite of Engineering Tamaram, Makavarapalem Md Visakhapatnam District, Pin-531113



(Approved by AICTE, Permanently Affiliated to JNT University Kakinada, Accredited by NAAC and Recognized under 2(f) &12 (b) by UGC, New Delhi) Tamaram, Makavarapalem, Narsipatnam (RD), Visakhapatnam-531113

Data Science work flow and tools

Duration: 4th Nov 2019 to 9th Nov 2019

SCHEDULE

Day-1 (04/11/2019)

- 09:00 to 10:00 Inaugural Session
- 10:00 to 12:00 Introduction to data science in Python
- 12:00 to 01:00 Lunch Break
- 01:00 to 04:00 Introduction to data science in Python

Day-2 (05/11/2019)

- 09:00 to 12:00 Introduction to Machine learning
- 12:00 to 01:00 Lunch Break
- 01:00 to 04:00 Explanation to Machine learning

Day-3(06/11/2019)

- 09:00 to 12:00 Introduction to Algorithms
- 12:00 to 01:00 Lunch Break
- 01:00 to 04:00 Explanation to Algorithms used in Machine learning

Day-4(07/11/2019)

- 09:00 to 12:00 Statistical Foundations for D.S
- 12:00 to 01:00 Lunch Break
- 01:00 to 04:00 Describe Statistical Foundations for D.S

Dav-5(08/11/2019)

09:00 to 12:00	Introduction to Scientific Computing
12:00 to 01:00	Lunch Break
01:00 to 04:00	Describe Scientific Computing

Day-6(09/11/2019)

- 09:00 to 12:00 Optimization Techniques
- 12:00 to 01:00 Lunch
- 01:00 to 04:00 Optimization Techniques

Coordinator

Head of the Department Kommuter Science and Engineering Tamaram, Makavarapalem Md Visakhapatnam District, Pin-531113



(Approved by AICTE, Permanently affiliated by JNT University Kakinada Accredited by NAAC and Recognized under 2(f) & 12(b) by UGC, New Delhi) Tamaram, Makavarapalem, Narsipatnam(RD), Visakhapatnam-531113 DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING

Data Science Workflow and Tools

Date : 4/11/2019 To 9/11/2019 IV & II B.Tech STUDENTS ATTENDANCE LIST

S.NO	ROLL.NO	NAME OF THE STUDENT	Day 1	Day 2	Da 3	Day 4	Day 5	Day 6
1	16811A0501	ABRAHAM SHARON LEELA	N		J J		Day 5	Dayo
2	16811A0502	ADHIKARI SWATHI		~		J		v
3	16811A0503	AKULA LAVANYA	1	\checkmark				
4	16811A0504	ANNAPAREDDY DALI DEEPIKA	~					
5	16811A0505	BADIREDDY SURENDRA	\checkmark	~	~	1	~	\checkmark
6	16811A0506	BANDARU SARASWATHI	1	5	<i>✓</i>	1	<i>✓</i>	5
7	16811A0507	BEESETTI YUVA KIRAN SAI		~	×	5		1
8	16811A0508	BHEEMISETTY LAVANYA	~	1	~	1		\checkmark
9	16811A0509	BHEEMISETTY RAMYA	入	<i>✓</i>	1	\checkmark	1	
10	16811A0510	BOBBADI SIVA GOWRI	~	\checkmark	5	1		1
11	16811A0511	BODDEDA SIVA GOPI LAKSHMI	1	1	~			
12	16811A0512	BODDU JAYA MADHURI	~	\checkmark	1	1	\checkmark	\checkmark
13	16811A0513	BOLEM SAIKUMAR	/		\checkmark	1	1	\checkmark
14	16811A0514	BOTCHA DURGA	1			~		
15	16811A0515	DARAKONDA VASANTHA	<i>\</i>	1	\checkmark	~	×	1
16	16811A0516	DEVARAPALLI NAGA		5	1		1	\checkmark
17	16811A0517	DEVARASETTI JAGADESWAR	1		 ✓ 	1	\checkmark	

18	16	5811A0518 E	DH A	ARMALA SAI GURUDATTA	\checkmark	~	1	~	~	1	
19	16	5811A0519 I	DIM	AILI RAGHURAM	~			\checkmark	1	/	X
20	16	6811A0520 I	DO	DDI HARIKA RAMANI	1		/	1	/		
21	1	6811A0521	DW	ARAPUREDDY ANITHA	1			./	5		1
22	1	6811A0522	EL	LAPU UPENDRA KUMAR	1		/	1	1	1	
23	5 1	6811A0523	GA	ANDETI SRINIVASA RAO			/	\mathbf{i}	1	1	\checkmark
24	4 1	16811A0524	GA	ANDIPADALA GANGADHAR	\checkmark			1	\checkmark	1	1
2	5	16811A0525	GA	ANGALA SRAVANI	1		\checkmark	1	5	1	/
2	.6	16811A0526	G	ANGIREDDY GOUTHAM	5		\checkmark	/			1
2	27	16811A0527	G	INNI JYOTHISHMATHI			\checkmark	×	1	\checkmark	1
	28	16811A0528	G	OGADA SATISH NAIDU			\checkmark	\checkmark	1	\checkmark	
	29	16811A0529	G	GORLE PADMA			\checkmark			\checkmark	\checkmark
	30	16811A0530) (GUDIVADA EEPSITHA JAHNAVI			\checkmark		\checkmark	\checkmark	\checkmark
	31	16811A0531		GUMMIDI INDRAVATHI	\checkmark		\checkmark		1		
	32	16811A0532	2 J	JETTI HEMANTHI	\checkmark		\checkmark				√
Γ	33	16811A053	3 1	KAVULURI MANASA SRILAXMI			\checkmark		V		
Γ	34	16811A053	4	KILAPARTHI SOMESWARA RAC			\checkmark	V			
Γ	35	16811A053	5	KILLADA LEELA PRASAD	/		\checkmark				
Γ	36	16811A053	36	KOLAGANI GIRISHMA	1		\checkmark				
Γ	37	16811A053	37	KONA VARMA			\checkmark				
[38	16811A05	38	KOTIPALLI SWAMY			<u> </u>		\checkmark		
	39	16811A05	39				<u> </u>	+	-		
	40					-					
	41						<i></i>				
	42	2 16811A05	542	KUPPILI SANDEEP KUMAR							

43	16811A0543	LAKAMSANI DURGA SAI ANIL	\checkmark	/	\checkmark	\checkmark	\checkmark	\checkmark
44	16811A0544	MADEM UMADEVI	1	\mathcal{S}	\checkmark	\checkmark	\checkmark	
45	16811A0545	MALLA MRUDULANKITHA	5	\checkmark	\checkmark	/	1	1
46	16811A0546	MATSA BHAGYA LAKSHMI		Ĵ,	\checkmark			
47	16811A0547	MEDESETTI PAVANI		\checkmark	\checkmark			X
48	16811A0548	MIDATHANA SITARAMA RAJU	<i>\</i>	5	\checkmark		1	
49	16811A0549	MINDI SAI VENKATA	\checkmark		\checkmark	\checkmark		
50	16811A0550	MISRO MONALI	1	\checkmark		1		
51	16811A0551	MODALAVALASA MADHU		\checkmark	\checkmark	<i>\</i>		
52	16811A0552	MOHAMMAD GULE AFSHA		\checkmark	\checkmark			
53	16811A0553	NADIPINTI DURGA MOHAN		\checkmark	×	1		
	16811A0554	NAGUBILLI		-	~	5		
54	10811A0334	SANTHOSHILAKSHMI					(
55	16811A0555	NAKKA GANESHDURGA			•	5		
56	16811A0556	NALLALA RAMU						
57	16811A0557	NALLALA SATEESWARARAO						
58	16811A0558	PACHCHIKURA LIKITHA						
59	16811A0559	PACHIGOLLA SRINIVASU			\sim			
60	16811A0560	PANDE GIRINDHAR RAO		×	\checkmark			
61	16811A0561	PAPPU KRUTHIKA						
62	16811A0562	PATCHIGOLLA LATHA	5					
63	16811A0563	PATHALA PRASAD				-		
64		PATNANA KISAN KUMAR		\checkmark	\checkmark		×	4
65	16811A0566	PEDADA NINEESHA	<i>\</i>	\checkmark			+	
	16811A0567	PEDIREDLA SUSMITHA			\checkmark			\checkmark
66	1001170307							

	- 1		-					-
67	16811A0568	PERAPU VARA POORNIMA	\checkmark	~	\checkmark	5	<u> </u>	<i></i>
68	16811A0569	PITLA CHANDRIKA		\checkmark	<i>\</i>	5	\checkmark	\checkmark
69	16811A0570	PITTA HARISH		\checkmark	\checkmark	\checkmark	\checkmark	\checkmark
70	16811A0571	PITTA SUNIL KUMAR	5	1		\checkmark	\checkmark	\checkmark
71	16811A0572	PRASADAM SIVA KRISHNA	\checkmark	/	\checkmark	$\boldsymbol{\checkmark}$	\checkmark	5
72	16811A0573	PUDI GANESH	\checkmark	\times	\checkmark	5	\checkmark	×
73	16811A0575	RAPETI HEMANTH	\checkmark	\checkmark	\checkmark	5	1	5
74	16811A0576	RAVI SRI RAM	5	\checkmark	\checkmark	1	\checkmark	\checkmark
75	16811A0577	REDDY SRIKANTH	\checkmark	\checkmark	\checkmark		\checkmark	\checkmark
76	16811A0578	SALUMURI DILIP KUMAR	\int	5	\checkmark	\checkmark	\checkmark	\checkmark
77	16811A0579	SAMMETLA RAVI KARUN	\checkmark	\checkmark	\checkmark	\checkmark	1	\checkmark
78	16811A0580	SANAPALA TEJASWARI	\checkmark	./	\checkmark		\checkmark	\checkmark
79	16811A0581	SHEIK BADIRUDDIN		1	\checkmark	~	\checkmark	<u> </u>
80	16811A0582	THIMMAPATRUNI BHAVANI		\checkmark	5	1	\checkmark	\checkmark
81	16811A0583	TONDAPU DHEERAJ REDDY	\checkmark	\checkmark	\checkmark	1	\checkmark	
82	16811A0584	VARRE PRIYA MAHALAXMI	\checkmark	\checkmark	\times	\checkmark		\checkmark
83	16811A0585	VEESAM JAHNAVI		\checkmark	5	\checkmark	\checkmark	
84	16811A0586	VEGI LOKESH	\checkmark	\checkmark	5	\checkmark	\checkmark	\int
85	16811A0587	VELAGA GAYATHRI	×	\checkmark	\checkmark	\checkmark	5	\checkmark
86	16811A0588	VONTEDDU NAGA VENKATA			\checkmark	\checkmark	×	5
00		DEEPAK	~	•				-
87	16811A0589	VUPPALA SRAVANI	\checkmark	\checkmark	~	\checkmark	5	1
88	16811A0590	YELLAPU MANI KUMAR	\checkmark	\checkmark	1	/		
89	17815A0501	KOILADA ROHIT GOVIND	~		5	1	\checkmark	
90	17815A0502	MOTURU YAMINI NAGA DEVI	<i>\</i>	\checkmark	\checkmark			

91	17815A0503	CHINTALA LOKESH	\checkmark	\checkmark			\checkmark	
92	18811A0501	BAILAPUDI PADMA	×	1	~	\checkmark	1	
93	18811A0502	BHANUMATHI PALAPARTHI	5	5		1	$\boldsymbol{\mathcal{I}}$	
94	18811A0503	BODDAPU PRASAD	\checkmark	/		\checkmark		1
95	18811A0504	BODDEDA LOKESH	\checkmark	/	1	1	\checkmark	\checkmark
96	18811A0505	BOINA TEJA	2					\checkmark
97	18811A0506	BONTHU PRANAY		X				
98	18811A0507	DACHEPALLI VENKATA	1	5	5	.(1	\mathcal{A}
90	18811A0307	VIJAYALAKSHMI				Ŭ	5	-
99	18811A0508	DARAPUREDDY VANI	1		1	1	1	1
99	18811A0508	VASUNDHARA	v	Ū	~			
100	18811A0509	DIVYA BISAI	\checkmark	~	×	\checkmark	/	/
101	18811A0510	DUGGINENI UMESH CHANDRA	5	N	<i>J</i>	\checkmark	\checkmark	\checkmark
102	18811A0511	DWARAM SUSHMITHA YAMINI		5	1	1	\checkmark	5
103	18811A0512	GANDI BHARDWAZ NAIDU	5	1	5	\checkmark		/
104	18811A0513	GOGINENI ALEKHYA	1	\checkmark	\checkmark	\checkmark	\checkmark	\checkmark
105	18811A0514	GOKADA PRASANTH KUMAR	5	\checkmark	\sim	1	\checkmark	
106	18811A0515	GOLTI SAI KOTI MEGHANA	\checkmark	\checkmark	5	/		<u> </u>
107	18811A0516	GOPALADAS VASANTHI	V	1	\checkmark	/		\checkmark
108	18811A0518	GORLA ABHISHEK	<i>S</i>		\checkmark	\checkmark	5	\checkmark
109	18811A0519	GORLE SRI SATYA	5	\checkmark	~	\checkmark	\sim	\checkmark
110	18811A0521	GURE CHANDRIKA	\checkmark	1	/	\checkmark		\checkmark
111	18811A0522	GURRAM BHARGAVI	\checkmark			\checkmark	\sim	
112	18811A0523	GURUCHARANA KRISHNA	1	1	~	/		
112	18811A0525	LAHARI					Ŭ	Ŭ
113	18811A0524	IMANDI RUBIN PRINCE		~		~	\checkmark	5
114	18811A0526	K VASANTHA		V	~	~	5	×
115	18811A0527	KADALI NISCHALA DEVI	5		\checkmark	\checkmark	\checkmark	5
116	18811A0528	KADAVALA SAI PRIYA	5		\int	\checkmark	\checkmark	\sim
117	18811A0530	KANTA RUCHITHA					<i>\</i>	

118	18811A0531	KARAKAVALASA DHANALAKSH	imi 🗸	\checkmark				
119	18811A0533	KEERTHI TEJASWI	\checkmark	\checkmark	\checkmark	1		
120	18811A0534	KILAPARTHI DURGA PRASAD	1	~	\checkmark			~
121	18811A0536	KOTHAKOTA MAHESWARI				\checkmark	1	
122	18811A0537	KOTTE SAI GANESH				\checkmark	1	
123	18811A0538	LAKKOJU SRAVAN KUMAR				$\overline{\checkmark}$	1	
124	18811A0540	MADUGULA JAGAN MOHAN	~	1	\sim	(
124	10011A0340	SATYA DURGA PRASAD	\sim	,		\checkmark	X	
125	18811A0541	MAJJI SAI LAKSHMI		X				
126	18811A0542	MAJJI TULASI	<i>\</i> .					
127	18811A0543	MARISETTI MEENAKSHI						X
128	18811A0544	MEDISETTI JANAKI	\checkmark			~	\checkmark	
129	18811A0546	PATHAKAMUDI SHARMILA						
130	18811A0547	PATHALA NAGENDRA			\checkmark		V	7
131	18811A0549	PILLA BHARGAVI						
132	18811A0551	POTHAMSETTI MANIKANTA				\checkmark		\checkmark

Hoy? Coordinator



Avanthi Institute of Engg. & Technology Tamaram, Makavarapalere McL, Visakhapatnam District, PIN-531113

1



(Approved by AICTE, Permanently Affiliated to JNT University Kakinada, Accredited by NAAC and Recognized under 2(f) &12 (b) by UGC, New Delhij Tamaram, Makavarapalem, Narsipatnam (RD), Visakhapatnam-531113

DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING

A Course On

Data Science Workflow and Tools

Dated on: 04/11/2019



COORDINATOR

Avanthi Institute **di EN**g & Technology Tamaram, Makavarapalem Md Visakhapatnam District, Pin-531113



AVANTHI

INSTITUTE OF ENGINEERING AND TECHNOLOGY

Tamaram (V), Makavarapalem (M), Visakhapatnam Dist. 531113. (Approved by AICTE, Accredited by NAAC, Permanently Affiliated to JNTU Kakinada)



This is to certify that Mr./Ms. _________of ________has participated in the Certificate Course entitled on **DATA SCIENCE WORKFLOW AND TOOLS** during from 4TH NOV 2019 to 9TH NOV 2019 was organized by the Department of <u>COMPUTER SCIENCE AND ENGINEEERING</u> at Avanthi Institute Of Engineering and Technology



HOD





AVANTHI INSTITUTE OF ENGINEERING AND TECHNOLOGY (Approved by AICTE, Permanently Affiliated to JNT University Kakinada, Accredited by NAAC and Recognized under 2(f) &12 (b) by UGC, New Delhi) Tamaram, Makavarapalem, Narsipatnam (RD), Visakhapatnam-531113

Department of Computer Science and Engineering

Date: 11-11-2019

BRIEF REPORT

Department of Computer Science and Engineering, Avanthi Institute of Engineering and Technology had organized a certificate course on **"Data Science workflow and tools"** during 4-11-2019 to 9-11-2019.

We had **Resource Person: Dr.S.Jhansi Rani, Assistant Professor, A.U** was explained each and every details about data science workflow and tools. He extensively explained about Data science is defined, unsurprisingly, as "the study of data." That certainly narrows it down! Fortunately, there's more to it. The purpose of data science is to gain knowledge and insights from all kinds of data, structured or unstructured. The process includes creating and implementing ways of recording, analyzing, and storing data to glean useful information effectively. Predictive segmentation removes the need for all of the manual work by automatically identifying and analyzing the valuable or high-potential audience segments that need to be targeted. However, as an individual capability, it does not help in determining the right experience that should be tailored for each identified audience segment.Statistical Foundations of Data Science gives a thorough introduction to commonly used statistical models, contemporary statistical machine learning techniques and algorithms, along with their mathematical insights and statistical theories.

Coordinator

PH

Head of the Department

Avanmputer Science and Engineering Tamason, makavarapalem Md Visakhapatnam District, Pin-531113