Bhoj Reddy Engineering College for Women: Hyderabad

Department of Information Technology

Lesson plan of faculty member for the academic year 2016–17

Class: IV B Tech Branch-Section: IT-A Semester: I

Subject: Big Data Analytics (Associate Analytics-2) Lectures per week: 4+1 (Tutorial)

Lecture Number	Topics to be covered	Date (s)
UNIT–I : Data Management		
1	Introduction, Essence and Application	14 June 2016
2	DBMS vs ERP vs Data warehouse	15 June 2016
3	Design Data Architecture and manage the Data for analysis	16 June 2016
4	Understand various sources of the Data : Primary and Secondary	18 June 2016
5	Tutorial (G2,G1,G3) – Data Architecture and Sources	15, 16, 18 June 2016
6	Data sources like Sensors/Signals/GPS	21 June 2016
7	Data Management, Data Quality,	22 June 2016
8	Data Preprocessing	23 June 2016
9	Export all the Data onto the cloud like Amazon web services S3	25 June 2016
10	Tutorial (G2,, G1, G3) – Sources of generating Primary data	22, 23, 25 June 2016
11	Introduction, Workplace Safety, Report Accidents and Emergencies	28 June 2016
12	Protect Health and Safety as You Work	29 June 2016
UNIT–II: **Big Data Tools**		
13	Introduction to the Big Data tools like Apache Spark,	30 June 2016
14	Apache Spark, Scala	2 July 2016
15	Tutorial (G2, G1, G3) – Protect Health and Safety as You Work	29, 30 June, 02 July 2016
16	Cloudera Impala, Hadoop and HDFS	05 July 2016
17	Hadoop and HDFS	09 July 2016
18	Tutorial (G3) – Big Data tools	09 July 2016
19	Hadoop and HDFS	12 July 2016
20	Data ETL (Extract, Transform, Load) System	13 July 2016
21	Data ETL (Extract, Transform, Load) System	14 July 2016
22	Identify gaps in the data and follow-up for decision making	16 July 2016
23	Tutorial (G2, G1, G3) – Big Data tools, Data ETL	13, 14, 16 July 2016
24	Introduction, Knowledge Management	19 July 2016
25	Standardized Reporting and compliance	20 July 2016
26	Standardized Reporting and compliance	21 July 2016
27	Decision Models	23 July 2016
28	Tutorial (G2, G1, G3) – Knowledge Management	20, 21, 23 July 2016
UNIT–III: **Big Data Analytics**		
29	Introduction to Big Data Analytics	26 July 2016
30	From relational databases to Big Data	27 July 2016
31	Key-value store, Columns based databases	28 July 2016
32	Document based databases, Graph databases	30 July 2016
33	Tutorial (G2, G1, G3) – Types of Databases	27, 28, 30 July 2016
34	Run the descriptive to understand the nature of available data	02 August 2016
35	Run the descriptive to understand the nature of available data	03 August 2016
36	Collate all the data sources to suffice the business requirement	04 August 2016
37	Collate all the data sources to suffice the business requirement	06 August 2016
38	Tutorial (G2, G1, G3) – Nature of data and collate data sources	03, 04, 06 August 2016
39	Run the descriptive statistics for all the variables and observe the data ranges	16 August 2016
40	Outlier detection and elimination	17 August 2016
41	Outlier detection and elimination	18 August 2016
42	Data preprocessing for the analysis	20 August 2016
43	Tutorial (G2, G1, G3) - Descriptive statistics	17, 18, 20 August 2016

UNIT–IV: **Machine Learning Algorithms**		
44	Hypothesis testing	23 August 2016
45	Determining the multiple analytical methodologies	24 August 2016
46	Determining the multiple analytical methodologies	27 August 2016
47	Tutorial (G2, G3) – Analytical Methods	24, 27 August 2016
48	Train model using statistical/machine learning algorithms,	30 August 2016
49	Train model using statistical/machine learning algorithms,	31 August 2016
50	Test model	01 September 2016
51	Test model	03 September 2016
52	Tutorial (G2, G1, G3) – Train and Test model	31 August, 01, 03 September 2016
53	Sample for prediction	06 September 2016
54	Sample for prediction	07 September 2016
55	Sample for prediction	08 September 2016
56	Explore the chosen algorithms for more accuracy	10 September 2016
57	Tutorial (G2, G1, G3) – Sample for prediction	07, 08, 10 September 2016
58	Explore the chosen algorithms for more accuracy	13 September 2016
59	Explore the chosen algorithms for more accuracy	14 September 2016
UNIT–V: **Data Visualization**		
60	Prepare the data for visualization	15 September 2016
61	Prepare the data for visualization	17 September 2016
62	Tutorial (G2, G1, G3) - Explore the chosen algorithms	14, 15, 17 September 2016
63	Tableau	20 September 2016
64	Tableau	21 September 2016
65	Tableau	22 September 2016
66	Quick view and D3	24 September 2016
67	Tutorial (G2, G1, G3) – Tableau	21, 22, 24 September 2016
68	Quick view and D3	27 September 2016
69	Draw insights out of visualization tools	28 September 2016
70	Draw insights out of visualization tools	29 September 2016
71	Draw insights out of visualization tools	01 October 2016
72	Tutorial (G2, G1, G3) – Insights out of visualization tools	28, 29 September, 01 October 2016
73	Product implementation	04 October 2016
74	Analytics application to various Domains	27 October 2016
75	Analytics application to various Domains	29 October 2016
76	Tutorial (G1, G3) – Previous question papers	27, 29 October 2016
77	Possible Short answer type questions in the external exam	01 November 2016
78	Possible essay answer type questions in the external exam	02 November 2016
79	Possible essay answer type questions in the external exam	03 November 2016
80	Tutorial (G2, G1) – Previous question papers	02,03 November 2016

Text books:

1. Student Hand book Associate Analytics M2

Name and signature of the faculty: Mr M Vinod ----

Name and signature of Head of the Department: Mr G Srinivasa Rao ----