Data Science

1. Business Analytics and Statistics **10 hrs**

Need of business analytics, understanding different types of analytics applications in domains like financial services, healthcare, telecom services etc

Overview of analytics – data sources, data preparation, ETL, data integration, data migration, Multidimensional data analysis, MDX, modelling, reporting and visualization

Statistical Data Analysis - Permutation & Combination, Linear algebra, Calculus, Set Theory & Probability, Central Tendency, Variance, Dispersion, Skewness, Probability Distributions, Correlation, Data analytics using R

2. Data Mining and Visualization **10 hrs**

Feature selection, Association mining, Market basket analysis, Classification, Clustering, Time series analysis, Forecast accuracy, Moving averages and Exponential smoothing, Text mining, Predictive Analytics

Reporting - KPIs, data visualization, dashboards, reports, trends, patterns

3. Big Data and Hadoop **20 hrs**

Importance of Big Data, Industry Examples of Big Data

Introduction to Hadoop, History, Architecture, YARN, HDFS Monitoring & Maintenance, Hadoop Environment, Hadoop in the cloud

Map Reduce Programming paradigms, more common algorithms: sorting, indexing and searching, Relational manipulation: map-side and reduce-side joins, deploying programs, optimization techniques

4. Handling Big Data **20 Hrs**

Pig - Introduction, Architecture, Hands-on Programming,

Hive - Introduction, Architecture, Hands-on Programming

Hbase, Machine learning using Apache Mahout, Stream analytics using Apache Spark

Introduction to Oozie, ZooKeeper, Sqoop, Flume

Case studies

Real Time Sentiment Analysis,

Recommendation system,

Targeted interaction (TI) using Outlier customer's detection in telecom domain,

Big data analytics in Yahoo / Google,

Predictive analytics in e-commerce

Assignments

1. Business analytics techniques using R
2. Design of multidimensional data model and use of ETL tool
3. Use of OLAP tool
4. Data mining algorithms using Weka
5. Data handling using HDFS
6. Map Reduce Programming
7. Pig Programming
8. Hive Programming
9. Job scheduling

ELIGIBILITY

- Engineering SE/TE/BE students in Electronics, E & TC, Electrical, Computer, Information Technology, and Instrumentation
- Working Professionals/ MTECH/ M.E./M.Sc./ B.Sc. Electronics
- Engineering Diploma holders in Electronics, E & TC, Computer, Information Technology, Instrumentation

Separate batches are designed for above mentioned each category.

ADMISSION PROCESS:

The online application can be filled in our website **www.vit.edu** and submit it after online payment of Rs. 12000 /- (Rupees Twelve Thousand Only)

Course Schedule:

Last Date of Admission	: 20th January 2015
Commencement of the Course	: 25th January 2015
Conclusion of the Course	: 11th March 2015

Course Timing:
Weekdays batch-6.30 pm to 8.30 pm
Weekend batch- 10 am to 6 pm (one batch for 2 hours)

Venue:

Vishwakarma Learning Labs
Vishwakarma Institute of Technology,
666, Bibwewadi, Upper Indira Nagar, Pune-411037
Phone: 7030417144, 7768917788
E-mail: shripad.bhatlawande@vit.edu

PUNCH LINE:

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IMAGE: AN EXECUTIVE ON THE PILE OF CUBES OF DATA ANALYSIS