

# Data Analytics

## Detail Syllabus and Lecture-wise break-up

### Data Definitions and Analysis Techniques

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- Elements, Variables, and Data categorization
- Levels of Measurement
- Data management and indexing
- Introduction to statistical learning and R-Programming

### Descriptive Statistics

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- Measures of central tendency
- Measures of location of dispersions
- Practice and analysis with R

### Basic analysis techniques

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- Statistical hypothesis generation and testing
- Chi-Square test
- t-Test
- Analysis of variance
- Correlation analysis
- Maximum likelihood test
- Practice and analysis with R

### Data analysis techniques

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- Regression analysis
- Classification techniques
- Clustering
- Association rules analysis
- Practice and analysis with R

### Case studies and projects

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- Understanding business scenarios
- Feature engineering and visualization
- Scalable and parallel computing with Hadoop and Map-Reduce
- Sensitivity Analysis