Introduction to Data Analytics
3 Days

Overview

Data Analysis is an ever- evolving discipline with lots of focus on new predictive modeling techniques coupled with rich analytical tools that keep increasing our capacity to handle big data. However, in order to chart a coherent path forward, it is necessary to understand where the discipline has come from since its inception.

The field of Business intelligence depends largely on Data analysis tools and techniques in order to inform effective decision making. In fact, the disciplines are so intertwined that some often confuse the two. Therefore, we begin our introduction by examining the history of Business intelligence, its relationship to data analysis, and why the two are needed to help businesses deliver a complete assembly of their 'data puzzle'. This module also addresses some of the hurdles businesses face when dealing with data overload, and suggests some possible solutions to the problem.

With the explosion of big data, businesses recognize there is a greater need for employing someone who is qualified to correctly analyze the data. In this module, we explore the qualifications for the data analyst as well as the analytic tools associated with the position. It is unfortunate that there is such a dearth of data analysts. With a projected shortage of 190,000 data science jobs into 2018, it is no wonder that businesses are scrambling to recruit talent.

- Learn the terms, jargon, and impact of business intelligence and data analytics.
- Gain knowledge of the scope and application of data analysis.
- Explore ways to measure the performance of and improvement opportunities for business processes.
- Be able to describe the need for tracking and identifying the root causes of deviation or failure.
- Review the basic principles, properties, and application of Probability Theory.
- Discuss data distribution including Central Tendency, Variance, Normal Distribution, and non-normal distributions.
- Learn about Statistical Inference and drawing conclusions about a Data Population.
- Learn about Forecasting, including introduction to simple Linear Regression analysis.
- Learn about Sample Sizes and Confidence Intervals and Limits, and how they influence the accuracy of your analysis.
- Explore different methods and easy algorithms for forecasting future results and to reduce current and future risk.