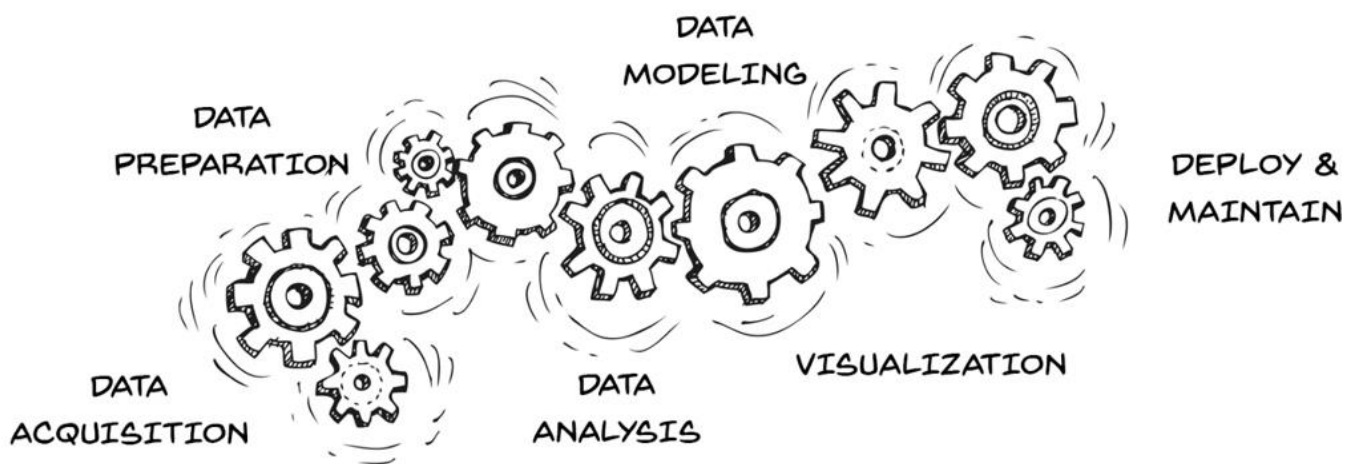


Data Science



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, the supply has been very limited. It is difficult to acquire the skills necessary to be hired as a data scientist.

Data science is a multidisciplinary field. It encompasses data analysis, statistics, programming, machine learning and visualization. In this course, we have covered the overall fundamentals of these areas.

Learning Outcome

Apply data analysis techniques to the solution of real world business problems, communicate findings, and effectively present results using data visualization techniques

Data Science Outline

Day 1

1. Introduction (1 day)
 - What is Data
 - Types of Data
 - Introduction to Data Science
 - The need for Business Intelligent
 - Data Science Life Cycle
 - Pre-processing
 - Data Gathering- crawling (online), local file

Day 2 -3

2. Exploratory Data Analysis (2 days)
 - Pandas
 - Numpy
 - Scikit-Learn
 - Matplotlib
 - Natural Language Processing
 - Dimension Reduction
 - Data Analytics overview
 - Data Analytics Communication
 - Data Process
 - Data Science Process
 - Data Cleansing
 - Extract, Transform and Load
 - Data Aggregation

Day 4 -5

3. Programming & Statistics (2 days)
 - Introduction to Python
 - Basic Operators and Functions
 - Python Environment setup
 - Data types with Python
 - Operating on Arrays
 - Structured Query Language

Day 6 -7

4. Machine Learning

- Introduction to Machine Learning
- Machine Learning Process flow
- Machine Learning categories
- Supervised and Unsupervised Learning
 - Classification
 - Decision tree
 - Naïve Bayes
 - Support Vector Machine
 - K-NN
 - Linear regression
 - Neural Network
 - Clustering
 - K-Means Clustering

Day 8 -9

5. Data Visualization (2 days)

- Tableau
- QlikView
- Power BI
- Chart Properties
- Chart Styling
- Box Plots
- Heat Maps
- Scatter Plots
- Bubble Charts
- Geographical Data
- Graph Data

Day 10

6. Advanced Topics

- Web Scraping
- Text Mining