LearnI!

DATA SCIENCE SYLLABUS

WEEK-1:

Foundations:

Start your journey in this prerequisite beginner's course by going over the fundamentals of data science and exposing you to the breadth of skills and tools in the industry professional's arsenal. In these first units, you will be introduced to the scientific programming environment, as well as the key concepts of both programming and statistical analysis.

Getting Started:

Local Setup and Development Environment

Python Programming & Computer Science:

Types, Flow Control, Data Structures, Functions, OOP and Time Complexity

SciPy Stack:

NumPy, pandas and matplotlib

Mathematics:

Statistics, Probability, Calculus and Linear Algebra

WEEK-2:

Data Analysis

Students will tackle a wide variety of topics under the umbrella of exploratory data analysis. Getting, cleaning, analysing and visualizing raw data is the main job responsibility of industry data scientists. Here you will learn how to discover patterns and trends that influence your future modelling decisions.

Getting and Cleaning Data

Static Files, SQL, Web Scraping, APIs and Messy Data

Statistical Inference

Event Space, Probability, Distributions and Hypothesis Testing

Summarizing and Visualizing Data

Descriptive Statistics, Univariate and Multivariate Exploratory Data Analysis

WEEK-3:

Machine Learning:

Students will learn how to explore new data sets, implement a comprehensive set of machine learning algorithms from scratch, and master all the components of a predictive model, such as data pre-processing, feature engineering, model selection, performance metrics and hyperparameter optimization.

Predictive Modelling:

Regression, Classification, Data Pre-processing, Model Evaluation and Ensembles.

Data Mining:

Dimensionality Reduction, Clustering, Association Rules, Anomaly Detection, Network Analysis and Recommender Systems.

Specialty Topics:

Data Engineering, Natural Language Processing, and Web Applications.

WEEK-4:

Applied Projects:

After mastering the curriculum, the Project Phase is all about applying HOURS what you've learned on either mock or live industry projects. You'll be given the opportunity to create real-world deliverables.

Independent Project:

Project based on personal interest or identified business problem with current employer.

WEEK 5 – 8:

Career Prep:

The support and mentorship don’t end at graduation. We're personally committed to working with every one of our alumni for as long as they need to continue evaluating work, providing mentorship and guidance, and facilitating their job search.

Workshops:

Resume, Cover Letter, LinkedIn, GitHub Portfolio and Networking Advice.

Interview Preparation:

Behavioural Questions and Mock Technical Challenges.