Data Analysis with Python

Programme duration

128 hours
Option of weekend or evening classes

Qualification description

A Data Analyst uses importing and cleaning data techniques as well as data visualisation and manipulation techniques to uncover insights and help organisations make better decisions. Therefore, the aim of this module is to empower students with the fundamental and technical knowledge as well as the applicable skill set required to analyse and interpret complex data.

You will learn many ways to import data into Python from various sources such as flat files (.txts and .csvs), Excel spreadsheets and relational databases (SQLite and PostgreSQL). Students will learn to improve their Python data importing skills and learn to work with web and API data. In addition, they will be equipped with all the skills needed to clean data in Python, from learning how to diagnose data for problems to deal with missing values and outliers. At the end of the module, students will apply all the techniques learned to a real-world case study.

You will exploit the power of tools such as pandas and SQLAlchemy so they can extract, filter and transform data quickly and efficiently, and this achieved by learning how to use the industry-standard pandas library to import, build, manipulate and merge DataFrames.

You will be equipped with complex data visualisation techniques using Mathplotlib and Seaborn, learn to create versatile and interactive data visualisations using Bokeh, and build the foundation they need to think statistically and learn to perform parameter estimation and hypothesis testing.

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