

Introduction to Data Science in Python

Beginners Python Data Analytics

In this age of big data, companies across the globe use Python to sift through the avalanche of information at their disposal. By storing, filtering, managing, and manipulating data in Python, you can give your company a competitive edge & boost your career to the next level. This course covers the aspects of practical data science using Python. In the end of this course, you'll easily use packages like Numpy, Pandas, and Matplotlib to work with real data in Python.

You Must Know!

Duration:

40 Hours

Who should attend?

Anyone Who Wishes To Learn Practical Data Science Using Python, Learn How To Implement Machine Learning Algorithms Using Python, or Looking To Get Started In Deep Learning Using Python. Prior Knowledge Of Python Will Be Useful But NOT Necessary

Main Topics:

- Numpy
- Pandas
- Data Pre-Processing
- Data Visualizations

Course modules

Module 1 – Introduction

- What is Data Science?
- Introduction to the Python Data Science Tool
- Introduction to the Python Data Science Environment
- Some Miscellaneous IPython Usage Facts

Module 2 – Introduction to Python Pre-Requisites for Data Science

- Rationale Behind This Section
- Different Types of Data Used in Statistical & ML Analysis
- Different Types of Data Used Programmatically
- Python Data Science Packages To Be Used

Module 3 – Numpy

- Numpy Introduction
- Create Numpy Arrays
- Numpy Operations
- Matrix Arithmetic and Linear Systems
- Numpy for Basic Vector Arithmetic
- Numpy for Basic Matrix Arithmetic
- Broadcasting with Numpy
- Solve Equations with Numpy
- Numpy for Statistical Operation

Module 4 – Pandas

- Data Structures in Python
- Read in Data
- Read in CSV Data Using Pandas
- Read in Excel Data Using Pandas
- Reading in JSON Data
- Read in HTML Data

Module 5 – Data Pre-Processing/Wrangling

- Rationale behind this section
- Removing NAs/No Values From Our Data
- Basic Data Handling: Starting with Conditional Data Selection
- Drop Column/Row
- Subset and Index Data
- Basic Data Grouping Based on Qualitative Attributes
- Crosstabulation
- Reshaping
- Pivoting
- Rank and Sort Data
- Concatenate
- Merging and Joining Data Frames

Module 6 – Introduction to Data Visualizations

- What is Data Visualization?
- Some Theoretical Principles Behind Data Visualization
- Histograms–Visualize the Distribution of Continuous Numerical Variables
- Boxplots–Visualize the Distribution of Continuous Numerical Variables
- Scatter Plot–Visualize the Relationship Between 2 Continuous Variables
- Barplot
- Pie Chart
- Line Chart



המרכז הבינלאומי
ללימודי הייטק וחדשנות

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מתקדמים
לקריירה בהייטק



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באר שבע

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פארק ההייטק

ירושלים

רחוב יפו 34

רחובות

רחוב אופנהיימר 5
פארק המדע

תל אביב

ראול ולנברג 36
קריית עתידים