Data Science Training for Beginners

Real-time online Data Science training for Beginners. From statistics to data analysis and machine learning, master the skills needed to solve complex challenges.

Prerequisite

This program requires no prerequisite courses. It's designed for beginners learning from scratch. Our goal is to help you go from 0 to 100 and learn enough to learn more.

How do you teach?

We teach in real time online 1-on-1 using Google Meet, Skype or Zoom. You can ask any questions any time, and you will get them answered. Our tutors are ready to mentor you.

Do I get a certificate?

Yes. We will provide you a Course Certificate on the condition that you complete and submit all projects and assignments by the end of the course. The certificate is not academic, it is a profesional training certificate.

Do I need equipments?

Yes. You need your own computer. Windows, Mac and Linux operating systems are all supported by the curriculum. You also need to have a stable internet connection.

Do you accept beginners?

Yes. The program is from zero to hero, so all knowlege will be covered. No much experiance required to join this course.

What is Data Science

Data science is the process of deriving knowledge and insights from a huge and diverse set of data through organizing, processing, and analyzing the data. It involves many different disciplines like mathematical and statistical modeling, extracting data from it source, and applying data visualization techniques. Often it also

involves handling big data technologies to gather both structured and unstructured data. Below we will see some example scenarios where Data science is used.

Requirement

- Be Able To Use PC At A Beginner Level, Including Being Able To Install Programs
- Prior Knowledge Of English language and good listening
- A Desire To Learn Data Science

What you'll learn?

1. Install Python Anaconda & Work Within The Jupyter Environment, A Powerful Framework For Data Science Analysis
2. Fundamentals of Python- Learn how to program core python programming and how muddles and packages are created and designed from the beginning
3. Python Data Science - Become Proficient In Using The Most Common Python Data Science Packages Including **Numpy, Pandas, Scikit & Matplotlib**
4. Data analysis techniques - Be Able To Read In Data From Different Sources (Including Webpage, Excel Data, and others) & Clean The Data
5. Data analytics - Carry Out Data Exploratory & Pre-processing Tasks Such As Tabulation, Pivoting & Data Summarizing In Python
6. Become Proficient in Working With Real-Life Data Collected From Different Sources
7. Carry Out Data Visualization & Understand Which Techniques To Apply When
8. Carry Out the Most Common Statistical Data Analysis Techniques in Python Including T-Tests & Linear Regression
9. Understand the Difference Between Machine Learning & Statistical Data Analysis
10. Implement Different Unsupervised Learning Techniques on Real-Life Data
11. Implement Supervised Learning (Both In The Form Of Classification & Regression) Techniques On Real Data
12. Evaluate the Accuracy & Generality Of Machine Learning Models
13. Build Basic Neural Networks & Deep Learning Algorithms

Course Content

1. Introduction to the Data Science in Python for beginners

- What is Data Science?
- Introduction to the Course & Instructor
- Data For the Course
- Introduction to the Python Data Science Tool
- Introduction to the Python Data Science Environment
- Some Miscellaneous IPython Usage Facts
- Online iPython Interpreter
- Different Types of Data Used in Statistical & ML Analysis

- Different Types of Data Used Programmatically
- Python Data Science Packages To Be Used

1.2. Complete Python Programming

- Python Get Started
- Python Variables
- Python Data Types
- Python Numbers
- Python Strings
- Python Booleans
- Python Operators
- Python Lists
- Python Dictionaries
- Python If...Else
- Python While Loops
- Python For Loops
- Python Functions
- Python Lambda
- Python Arrays
- Python Classes/Objects
- Python Inheritance
- Python Iterators
- Python Modules
- Python Math
- Python JSON
- Python RegEx
- Python PIP
- Python Try...Except
- Python User Input
- Python String Formatting
- Python File Handling
- Python Read Files
- Python Write/Create Files
- Python Delete Files

3.Introduction to Numpy

- NumPy Intro
- NumPy Creating Arrays
- NumPy Array Indexing
- NumPy Array Slicing

- NumPy Data Types
- NumPy Copy vs View
- NumPy Array Shape
- NumPy Array Reshape
- NumPy Array Iterating
- NumPy Array Join
- NumPy Array Split
- NumPy Array Search
- NumPy Array Sort
- NumPy Array Filter
- NumPy Random

4.Introduction to Pandas

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

4.1. Structured Query Language SQL

- MySQL Create Database
- SQL Create Table
- SQL Insert
- SQL Select
- SQL Where
- SQL Order By
- SQL Delete
- SQL Drop Table
- SQL Update
- SQL Limit
- SQL Join

5. Data Pre-Processing/Wrangling

- 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

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

7.Statistical Data Analysis-Basic

- What is Statistical Data Analysis?
- Some Pointers on Collecting Data for Statistical Studies
- Some Pointers on Exploring Quantitative Data
- Explore the Quantitative Data: Descriptive Statistics
- Grouping & Summarizing Data by Categories
- Visualize Descriptive Statistics-Boxplots
- Common Terms Relating to Descriptive Statistics
- Data Distribution- Normal Distribution
- Check for Normal Distribution
- Standard Normal Distribution and Z-scores
- Confidence Interval-Theory
- Confidence Interval-Calculation

8.Machine Learning for Data Science

- How is Machine Learning Different from Statistical Data Analysis?
- What is Machine Learning (ML) About? Some Theoretical Pointers
- Read in Data from Online CSV
- Read Data from a Database
- Data Imputation
- Analysis
- Predictions
- Learning