

Roadmap of Applied Data Science with Machine Learning

Data Science Level 1:

Duration: 6 Months

1. Python for Data Science: Fundamentals

- Programming in Python
- Variables and Data Types
- Lists and For Loops
- Conditional Statements
- Dictionaries and Frequency Tables
- Functions: Fundamentals
- Functions: Intermediate

2. Python for Data Science: Intermediate

- Cleaning and Preparing Data in Python
- Python Data Analysis Basics
- Working with Dates and Times in Python

3. Pandas and NumPy Fundamentals

- Introduction to NumPy
- Boolean Indexing with NumPy
- Introduction to pandas
- Exploring Data with pandas
- Data Cleaning Basics

4. Exploratory Data Visualization

- Line Charts
- Multiple plots
- Bar Plots
- Scatter Plots
- Histograms
- Conditional Plots
- Visualizing Geographic Data

5. Data Cleaning and Analysis

- Data Aggregation
- Combining Data with Pandas
- Transforming Data with Pandas
- Working with Strings in Pandas

- Working with Missing and Duplicate Data
 - Regular Expression Basics
 - Advanced Regular Expressions
 - List Comprehensions and Lambda Functions
6. **Data Visualization with Tableau**
- Connect Tableau to a Variety of Datasets
 - Analyze, Blend, Join, and Calculate Data
 - Visualize Data in the Form of Various Charts, Plots, and Maps
 - Dashboards
7. **SQL Fundamentals:**
- Introduction to SQL
 - Summary Statistics
 - Group Summary Statistics
 - Subqueries
 - Querying SQLite from Python
8. **SQL Advanced:**
- Joining Data in SQL
 - Intermediate Joins in SQL
 - Building and Organizing Complex Queries
 - Table Relations and Normalization

Note: In the end of Level 1 there will be an evaluation test or interview. Students who will successfully pass the exam will ONLY be proceeded to semester 2.

The students who have failed the exam will be given free of cost extra classes.

Techma Zone