

DATA SCIENCE IMMERSIVE

Data Science Immersive is a different flavor of Python Immersive Course. Data Science Immersive is a week-long comprehensive course with emphasis on practical application of Python to Data Analysis. First two days we cover Python built-in data types explaining differences in behavior of Data Structures laying a foundation for more complex NumPy and Pandas Structures.

At the end of this course you will have a fundamental understanding of Python programming language and analytical libraries: NumPy, Pandas, and Matplotlib. You will learn best practices and understanding how to write clean and efficient Python code. Also, you will gain essential knowledge of Data Structures needed to solve financial, analytical, and statistical problems in a fast and efficient manner. Moreover, you will have a portfolio of sample code solutions done in a professional style.

	Study Plan
Day 1 10.00am – 5.00pm	<ul style="list-style-type: none"> • Variables • Built-in data types: strings, integers, floats, lists • Introduction to built-in functions • Behavior of Data Structures • Control flow statements • If, Elif, Else statements • Definite loops: For loops • Practical exercises
Day 2 10.00am – 5.00pm	<ul style="list-style-type: none"> • How to write custom Python functions • Built-In data types: tuples, dictionaries, sets • Indefinite loops: While loops • Indexing and slicing • Reading data from CSV and TXT Files • Writing to CSV and TXT Files • Analyzing a file's content • Practical exercises
Day 3 10.00am – 5.00pm	<ul style="list-style-type: none"> • Lambda • List comprehensions • Scientific computing with Python • NumPy arrays • Creating and manipulating NumPy arrays • Computation on NumPy arrays
Day 4 10.00am – 5.00pm	<ul style="list-style-type: none"> • Aggregating data in Pandas • Data Indexing and Selection • Logic, Control Flow and Filtering in Pandas • Grouping by for analytics • Combining datasets and Merging datasets • High-performance Pandas: Eval and Query • Hierarchical indexing • Handling missing data • Practical exercises
Day 5 10.00am – 5.00pm	<ul style="list-style-type: none"> • Web scraping and Data Mining • Visualization with Matplotlib • Line Plots, Scatter Plots and Histograms • Customizing Plots • Multiple Subplots • Density and Contour Plots • Python best practices • How to write fast and efficient code – Big-O notation • Q&A

