Python Data Science & Machine Learning Bootcamp

Master Python for data analysis, machine learning, and automation. Build predictive models, create dynamic dashboards, and unleash the power of data visualization. Launch your career in data science and Python engineering, equipped with Python, NumPy, Pandas, and Matplotlib.

Group classes in NYC and onsite training is available for this course. For more information, email corporate@nobledesktop.com or visit: https://www.nobledesktop.com/certificates/python-programming

hello@nobledesktop.com • (212) 226-4149

Course Outline

This package includes these courses

- Python for Data Science Bootcamp (30 Hours)
- Python Machine Learning Bootcamp (30 Hours)
- Python for Automation (6 Hours)
- Python Data Visualization & Interactive Dashboards (24 Hours)

Python for Data Science Bootcamp

Build a strong foundation in Python programming and data analysis through real-world projects that prepare you for advanced topics like machine learning and predictive modeling.

- Learn Python fundamentals, including variables, data types, functions, loops, and control flow for building robust programs
- Work with complex data structures like dictionaries and lists to efficiently organize and access data
- Use NumPy and Pandas to import, clean, and manipulate datasets for analysis and exploration
- Generate descriptive statistics and apply filtering, grouping, and pivoting techniques for deeper insights
- Visualize data with Matplotlib and create clear, customized charts such as bar graphs, histograms, and scatter plots
- Gain the practical skills needed to transition into machine learning with a solid understanding of data science workflows

Python Machine Learning Bootcamp

Gain hands-on experience building predictive models using Python in this practical machine learning course, designed to help you understand core algorithms and apply them to real-world data.

- Explore foundational techniques like linear and logistic regression for modeling numerical and categorical data
- Understand the difference between regression and classification problems and when to apply each approach

- Build and evaluate models using k-nearest neighbors, decision trees, and ensemble methods like random forest
- Learn key concepts such as cross-validation, training vs test sets, and performance metrics like mean squared error
- Apply feature engineering techniques to improve model accuracy while managing overfitting and bias-variance tradeoffs
- Use Python's essential data science libraries, NumPy, Pandas, and scikit-learn, to structure data and implement algorithms
- Gain insights into how machine learning powers systems at companies like Netflix, Spotify, and Amazon
- Complete a final portfolio project that demonstrates your ability to apply machine learning to solve real problems

Python for Automation

Learn how to automate web tasks and extract valuable online data using Python, with practical training in web scraping, data storage, and script scheduling.

- Understand how websites are structured using HTML and CSS to identify elements for data extraction
- Learn Python fundamentals, including variables, data types, conditionals, loops, and list manipulation
- Use the Requests and Beautiful Soup libraries to perform web scraping and target specific content
- Write loops to automate scraping across multiple web pages and streamline repetitive tasks
- Store scraped data in various formats, including text files and CSVs, for analysis and reporting
- Schedule Python scripts to run regularly, enabling continuous data collection and workflow automation

Python Data Visualization & Interactive Dashboards

Transform raw data into interactive visual insights by building dashboards with Python's top visualization tools. This course blends analysis, design, and deployment to help you showcase data professionally.

- Work with real-life datasets using Python's core libraries, including NumPy for numerical computing and Pandas for data manipulation
- Create static and interactive visualizations using Matplotlib, Seaborn, and Plotly to clearly communicate trends and patterns
- Build multi-component dashboards using Dash Enterprise, incorporating callbacks, sliders, date pickers, and more
- Practice hands-on development by applying new skills to personalized projects with guided instructor support
- Publish your dashboards online using GitHub and Heroku to demonstrate your work to potential employers or clients
- Explore best practices for styling and structuring visual narratives that are clear, persuasive, and engaging