COURSE SYLLABUS

FinTech Bootcamp

At the end of the certificate, students will feel comfortable trading in Excel spreadsheets for Jupyter notebooks. Students will leave this course having worked on multiple projects using Python to pull, clean, analyze, and visualize financial data from all different sources. Additionally, students will learn how to use machine learning to build predictive financial models and export them into PDF or Excel. Lastly, students will gain an understanding of how to organize and find data in SQL.

Group classes (NYC) and onsite training are available for this course. For more information, email corporate@nobledesktop.com or visit: https://www.careercenters.com/certificates/fintech-bootcamp



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Course Outline

This package includes these courses

- Python for Data Science Bootcamp (30 Hours)
- Python Machine Learning Bootcamp (30 Hours)
- PostgreSQL Bootcamp (18 Hours)
- Python for Automation (6 Hours)
- Python for Finance Bootcamp (24 Hours)

Python for Data Science Bootcamp

- Handle different types of data such as integers, floats, and strings
- Control the flow of your programs with conditional statements, loops, and functions
- Reuse and simplify code with object-oriented programming
- Analyze tabular data with NumPy and Pandas
- Create graphs and visualizations with Matplotlib
- Make predictions with linear regression, using scikit-learn

Python Machine Learning Bootcamp

- How to clean and balance your data using the Pandas library
- Applying machine learning algorithms such as logistic regression and random forest using the scikit-learn library
- Choosing good features to use as input for your algorithms
- Properly splitting data into training, test and cross-validation sets
- Important theoretical concepts like overfitting, variance and bias

- Evaluating the performance of your machine learning models

PostgreSQL Bootcamp

- Explore information stored in a database (tables, columns, rows, etc.) using the graphical interface of DBeaver (a popular free database app)
- Write SQL queries to retrieve data from tables in a database
- Combine information from multiple tables with JOIN statements
- Filter data, group it, and sort it to extract the specific info you need
- Advanced techniques like Subqueries, String Functions, and IF-Else logic with CASE
- How to use Views and Functions with parameters instead of directly querying tables

Python for Automation

- Learn the syntax of Python and how to construct programs
- Learn how to run your programs on a regular schedule
- How to handle errors

Python for Finance Bootcamp

In this advanced course, you will cover the major Python financial libraries to gather and manipulate financial data. You will start by working with financial APIs to fetch financial, company, and economic data. We will analyze financial statements from the SEC website, including financial ratios derived from the income statement and balance sheet. You will build risk management models using Python libraries to create VAR models and Monte Carlo simulation. We will learn how to apply statistical measures such as linear regression to financial uses such as stock prices.