COURSE SYLLABUS

Data Science Certificate

Master the tools to become a data scientist: Python, SQL, automation, machine learning, and data visualization. Learn Python programming fundamentals, analyze and visualize data with Python's powerful libraries, and query databases with SQL. Use machine learning to apply regressions and other statistical analysis to create predictive models.

> Group classes (NYC) and onsite training are available for this course. For more information, email corporate@nobledesktop.com or visit: https://programwithus.com/certificates/data-science-nyc



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Course Outline

This package includes these courses

- Python for Data Science Immersive (30 Hours)
- SQL Bootcamp (18 Hours)
- Python Machine Learning Immersive (30 Hours)
- Python for Automation (6 Hours)
- Python Data Visualization & Interactive Dashboards (30 Hours)

Python for Data Science Immersive

- Programming foundations including objects, loops, and functions
- The object-oriented programming paradigm
- How to work with different types of data such as strings, lists, and integers
- Selectively alter the control flow of your programming with conditional statements
- Analyze tabular data using Python libraries NumPy and Pandas
- Create data visualizations with Matplotlib
- Predict outcomes using linear regression with scikit-learn

SQL Bootcamp

- Explore and alter data using a graphical user interface
- Write queries to search through tables programmatically
- Understand various data types and convert between them
- Combine information across tables with join statements

- Advanced techniques like subqueries and timestamp functions
- Translate business questions to SQL logic

Python Machine Learning Immersive

- 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

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 Data Visualization & Interactive Dashboards

- Plan & present a data story
- Gather and manipulate data from different sources
- Find data stories through exploratory data analysis
- Manipulate data with NumPy and pandas.
- Use advanced Python visualization libraries Plotly and Dash
- Build a dashboard
- Apply the rules of effective dashboard design to create professional data science solutions
- Go live with your project & deploy the dashboard on a live server