

# Python Overview for Managers

Course ISI-1511

1 Day

Instructor-led, Hands on

## Topics Covered

### Module 1: Python for Data Science

- Python modules and high-power features
- NumPy library
- Pandas library
- SciPy library
- Scikit-learn library
- Jupyter notebooks
- Anaconda distribution

### Module 2: Applied Data Science

- Define the term "Data Science"
- Compare data mining with data science
- Define who a data scientist is
- Describe the data scientist's typical activities
- Review some of the typical data science projects

### Module 3: Data Analytics Life-cycle Phases

- Data Discovery
- Data Harvesting
- Data Priming
- Model Planning
- Model Building
- Communicating the Results
- Production Roll-out

### Module 4: An Introduction to Python Programming

- Introduction to Python
  - Why Python works so well as your first programming language
  - Three types of Python applications
  - The source code for a console application
  - How Python compiles and runs source code
  - How disk storage and main memory work together
- How to use IDLE to develop programs
  - How to use the interactive shell
  - How to work with source files
  - How to compile and run a program

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- How to fix syntax and runtime errors

## **Module 5: How to Write Your First Programs**

- Basic coding skills
  - How to code statements
  - How to code comments
  - How to use functions
- How to work with data types and variables
  - How to assign values to variables
  - How to name variables
- How to work with numeric data
  - How to code arithmetic expressions
  - How to use arithmetic expressions in assignment statements
  - How to use the interactive shell for testing numeric operations
- How to work with string data
  - How to assign strings to variables
  - How to join strings
  - How to include special characters in strings
  - How to use the interactive shell for testing string operations
- How to use five of the Python functions
  - How to use the print() function
  - How to use the input() function
  - How to use the int(), float(), and round() functions
  - How to chain functions
- Two illustrative programs
  - The Miles Per Gallon program
  - The Test Scores program