

# Python 2: Visualization and Analysis

For Business and Finance Professionals

## Summary

This hands-on course is intended for anyone who uses Python and who is already comfortable with the skills that were taught in “Python 1: Core Data Analysis”. This course continues to build the skills needed to develop Python programs to solve typical Finance problems, cutting through the noise of generic “Data Science” courses.

Participants will be introduced to best-practices programming in Python to analyze and visualize financial data.



### Prerequisites

Participants require basic prior programming knowledge in Python and an understanding of the pandas package. Participants should also understand Finance and statistical concepts, but in-depth analytical understanding is not necessary. It is recommended that participants take “Python 1: Core Data Analysis” before this course.



### Timing

This course requires 1 day.

## Learning Topics

### 1. Data Visualization in Python

- ✓ Develop the ability to create powerful visualizations using the matplotlib and seaborn packages
- ✓ Plot and interpret scatterplots and time series plots
- ✓ Format settings of graphs
- ✓ Learn to create and interpret more advanced graphs such as histograms, box plots and bubble charts

### 2. Data Analysis and Modeling

- ✓ Gain experience in performing statistical analysis, linear regression, time series regression, and optimization
- ✓ Learn how to use statistical functions in popular data science packages such as *statsmodels*, *SciPy*, and *scikit-learn*
- ✓ Build and test financial market analyses to explore common tasks such as capital asset pricing, times series forecasting, multi-factor models and portfolio optimization