



Visualization



Python for Finance

- A lot of financial techniques will require us to be able to visualize our data!
- There are many libraries for visualization with Python, we will focus on Matplotlib and pandas' visualizations (built on top of matplotlib)



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- We won't cover other libraries in order to really focus on the financial aspects, instead of just visualization.
- Other great libraries are seaborn, cufflinks, plotly, bokeh, vincent, etc...



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- We will start by covering the basics of Matplotlib.
- Then with that knowledge we will be able to easily leverage pandas visualizations.
- We will also have a lecture focusing on time series visualizations.



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- The majority of all our plots in this course will be static (non-interactive), but we will show you a quick trick with jupyter that will allow you to interact with the plots we create!



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- This section will cover the following:
 - Matplotlib
 - Pandas Visualization
 - Pandas Time Series Visualization
 - Matplotlib Exercises
 - Pandas Visualization Exercises



Matplotlib



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- Matplotlib is a Python 2D plotting library which produces publication quality figures in a variety of hardcopy formats (png, jpg, etc...) and display plots in environments across platforms.



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- You can generate plots, histograms, power spectra, bar charts, errorcharts, scatterplots, etc., with just a few lines of code.
- It is the most powerful and customizable visualization library for Python!



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- It was initially based off MatLab's plotting capabilities.
- People tend to love it or hate it, but either way, it is so fundamental to visualization with Python, you should know the basics of working with it!



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- To get an idea of what is possible, go to:
 - <https://matplotlib.org/gallery.html>
- Let's explore the basics of matplotlib and its API.
- Understanding its core principles will be very helpful later on with pandas!



Matplotlib - Part Two



Matplotlib Exercises



Pandas Visualizations



Pandas Visualization Exercise Solutions