Module-03, Python for Data Analysis

Real Data Example(Finance)

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3-Months Course
at
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Finance Data Project

- In this data project we will focus on exploratory data analysis of stock prices. Keep in mind, this project is just meant to practice your visualization and pandas skills, it is not meant to be a robust financial analysis or be taken as financial advice.
- This project is extremely challenging because it will introduce a lot of new concepts and have you looking things up on your own (we'll point you in the right direction) to try to solve the tasks issued.
- Note: You'll need to install pandas-datareader for this to work! Pandas datareader allows you to read stock information directly from the internet Use these links for install guidance (pip install pandas-datareader),

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Data set

We need to get data using pandas datareader. We will get stock information for the following banks:

- Bank of America
- CitiGroup
- Goldman Sachs
- JPMorgan Chase
- Morgan Stanley
- Wells Fargo

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Figure out how to get the stock data from Jan 1st 2006 to Jan 1st 2016 for each of these banks. Set each bank to be a separate dataframe, with the variable name for that bank being its ticker symbol. This will involve a few steps.

- Use datetime to set start and end datetime objects.
- Figure out the ticker symbol for each bank.
- Figure out how to use datareader to grab info on the stock.

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- Let's explore the data a bit! Before continuing, I encourage you to check out the documentation on Multi-Level Indexing and Using .xs. Reference the solutions if you can not figure out how to use .xs(), since that will be a major part of this project.
- We can use pandas pct-change() method on the Close column to create a column representing this return value. Create a for loop that goes and for each Bank Stock Ticker creates this returns column and set's it as a column in the returns DataFrame.

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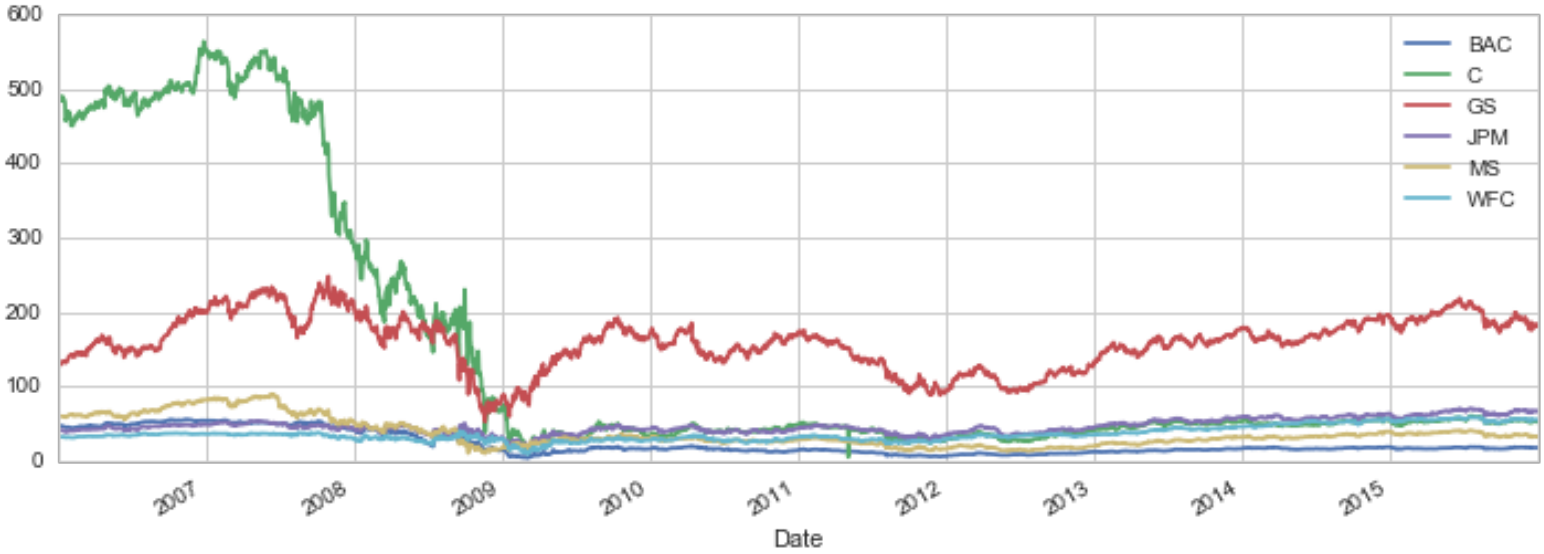
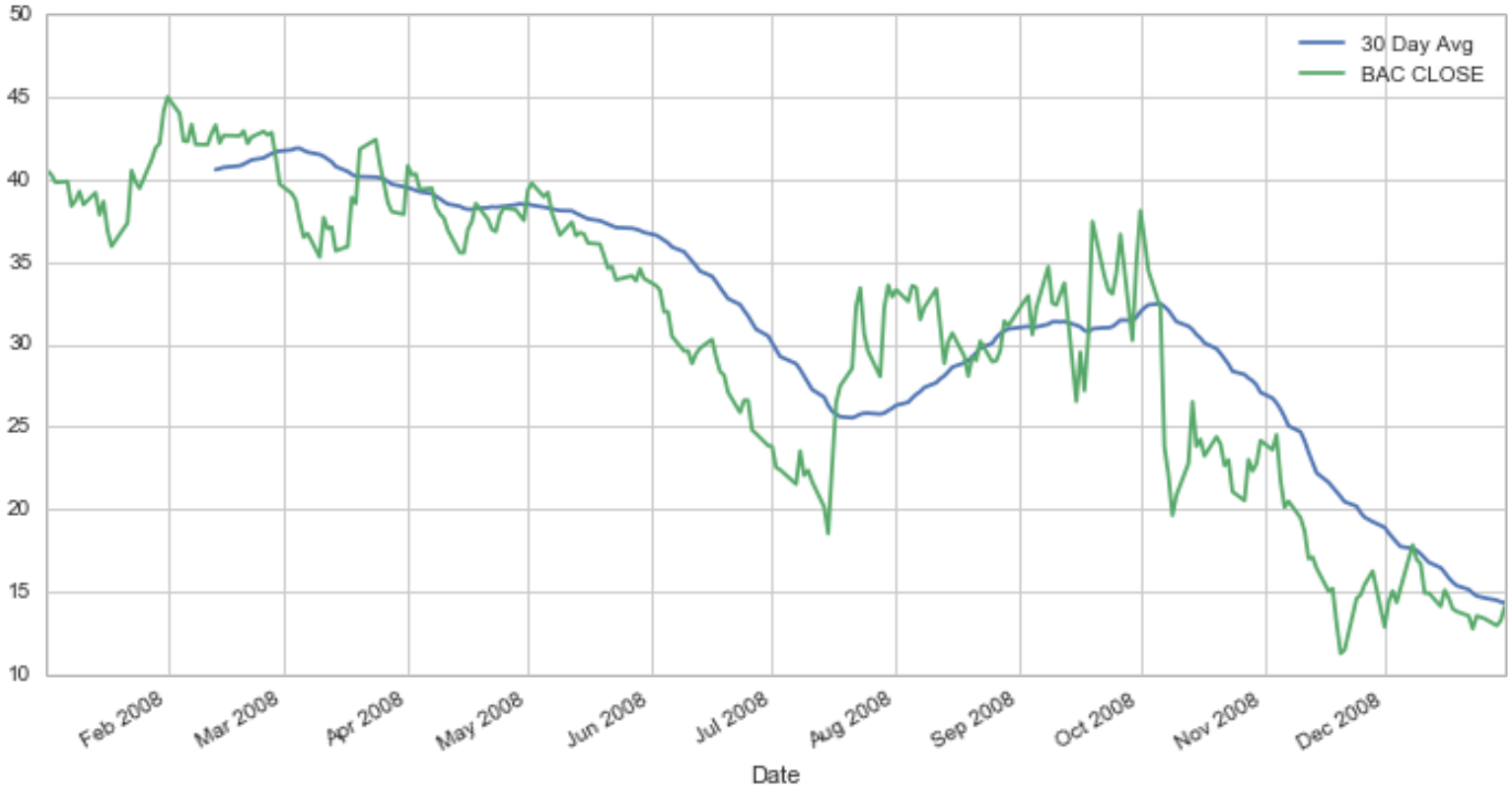
More Visualization

- Stock data



More Visualization

- Move Average



Great Job
Thank you