

Finance And Risk Analytics

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Problem Statement

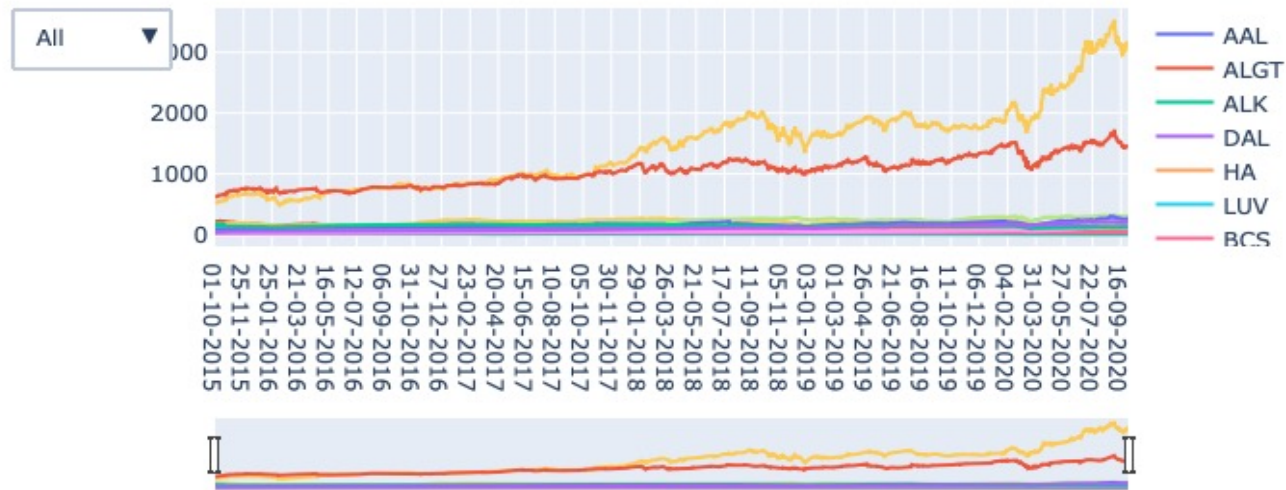
- Consider yourself working for an associate at an investment firm that manages accounts for private clients.
- Your role requires you to analyse a portfolio of stocks to provide consultation on investment management based on client's requirement.
- Your task is to provide consultation to two different investors, Mr Patrick Jyenger and Mr Peter Jyenger based on their requirements and financial objectives.
- You must perform the required steps for both the individuals after understanding the investor persona independently.

Steps Involved In Project

- Import all the important libraries
- Import all the 25 data files for each stocks
- Only keep the 'Date' and 'Close' columns in all the stocks
- Merge all the 24 stocks data in a single dataframe
- For active investment strategy only keep the last 5 years data
- Visualizations of stocks
- Build the ARIMA model to forecast the stocks
- Portfolio Management

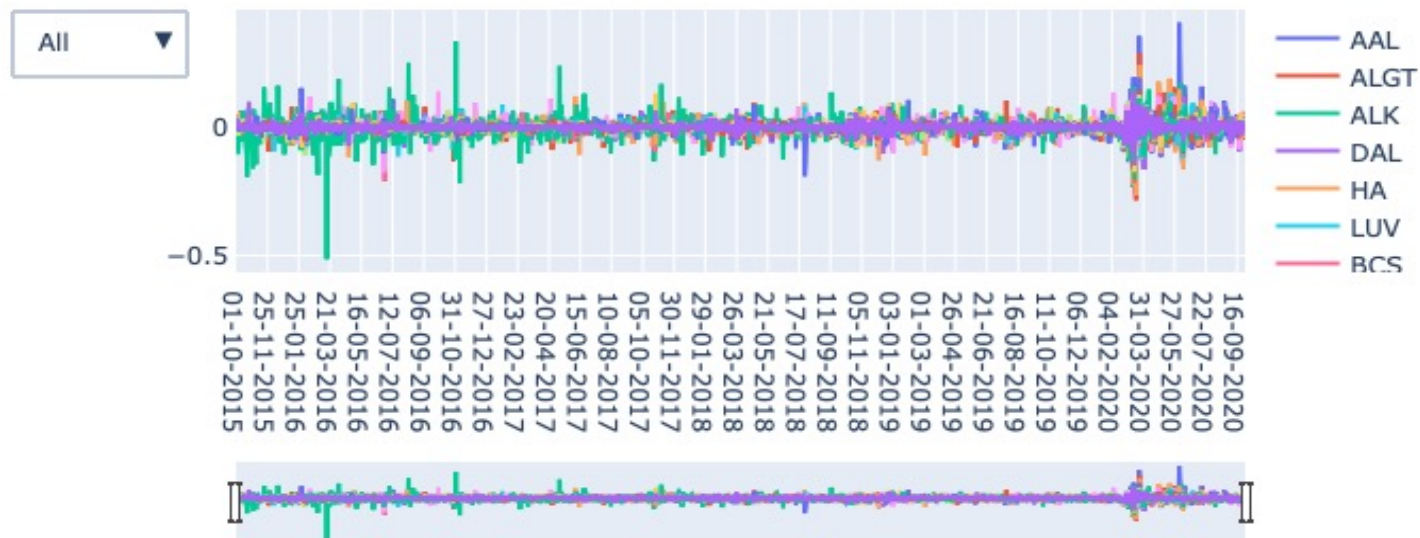
Actual Stocks Values

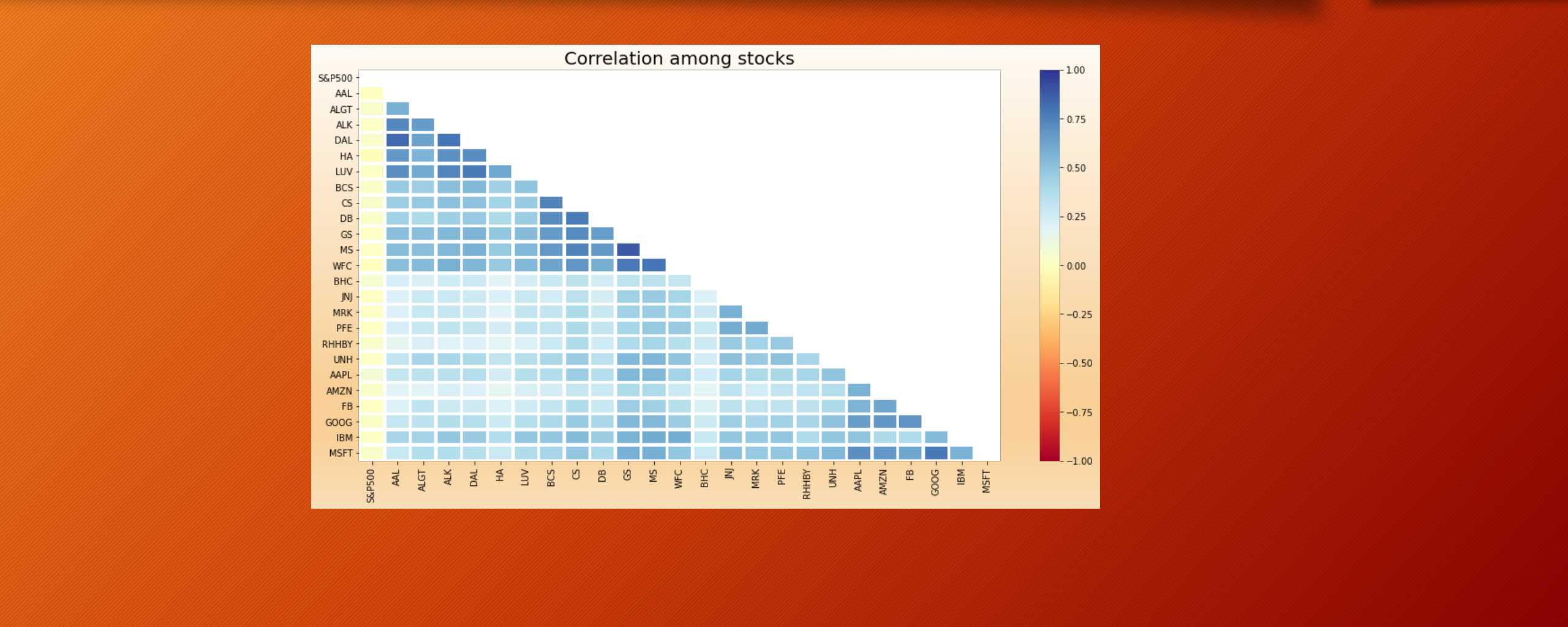
Visualizing Actual Stock Values



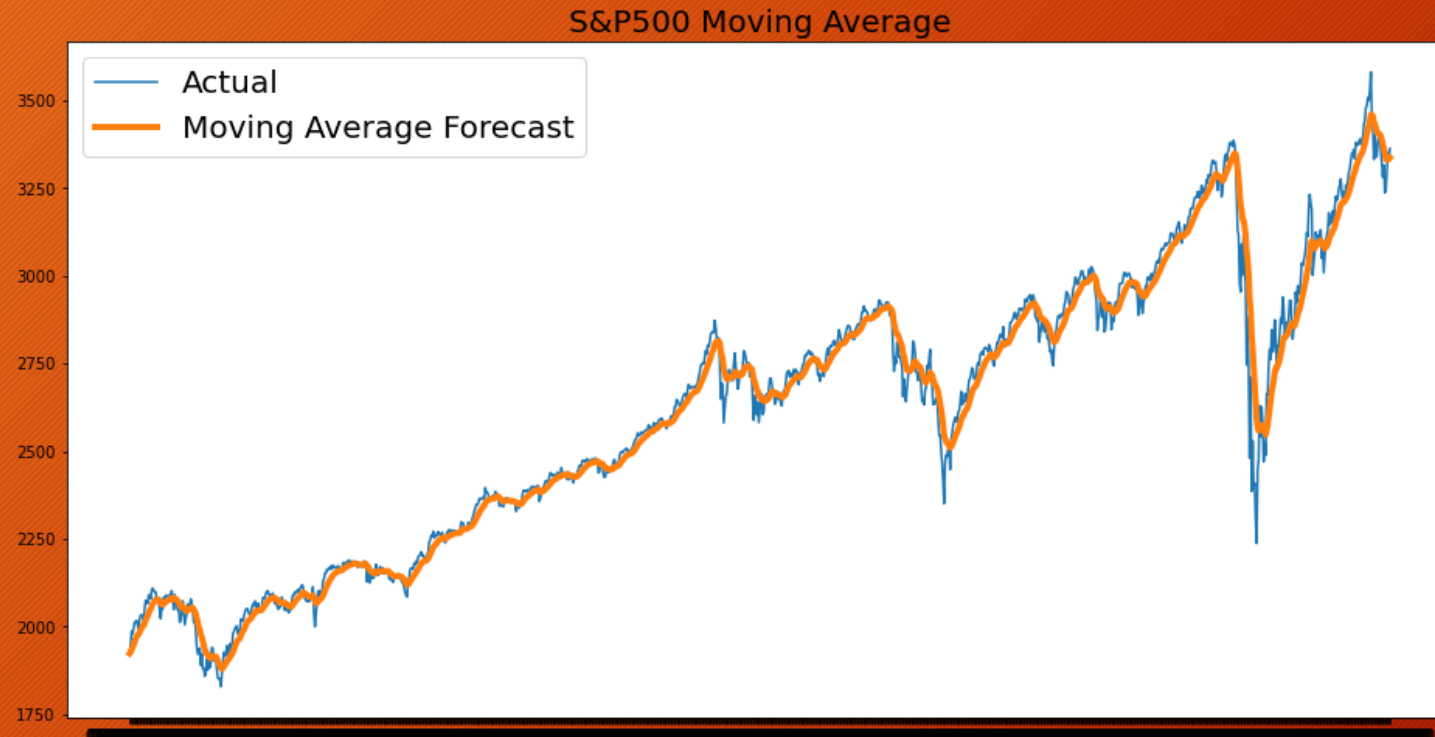
Daily Stocks Returns

Visualizing Daily Returns





Moving Average Forecast



Mr. Patrick Jyenger

- Mr. Patrick Jyenger
- Wants to maintain a decent standard of living post his retirement
- Has always been a conservative investor during his life
- Available capital of 1 million dollars; Wants to invest 500k dollars in a magazine (Naturo) for minority stake and remaining 500k dollars in equities
- Expects doubling his capital with less risk in 5 years' time to buy a minority portion of Naturo

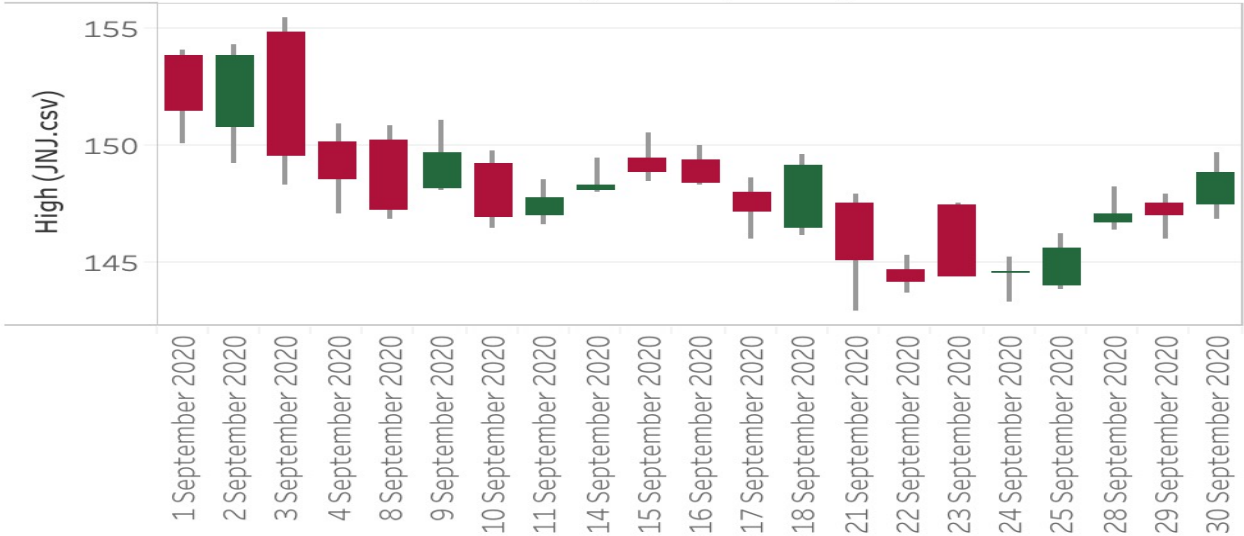
Suggested Stocks for Mr. Patrick Jyenger

	JNJ	PFE	RHHBY	MRK
Date				
01-10-2015	NaN	NaN	NaN	NaN
02-10-2015	0.008157	0.038945	0.003010	0.015597
05-10-2015	0.008836	0.012092	0.003601	0.021739
06-10-2015	-0.014141	-0.020609	0.002691	-0.027913
07-10-2015	0.016699	0.015249	-0.029228	0.023092
08-10-2015	0.001053	-0.006008	0.021505	0.001374
09-10-2015	0.003050	0.004533	-0.011729	-0.001372
12-10-2015	0.006501	-0.000602	0.004260	-0.004711
13-10-2015	-0.005626	-0.007225	0.005455	-0.024453
14-10-2015	-0.009639	0.001819	-0.004822	0.001415

Mr. Patrick Jyenger's Portfolio

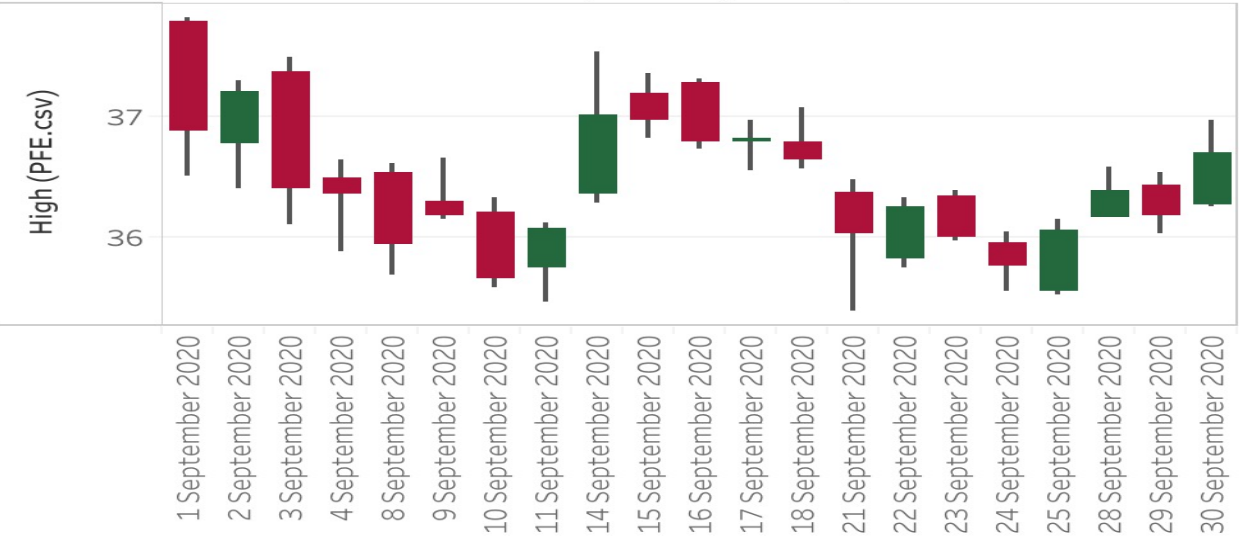
JNJ

Day of Date (JNJ.csv)



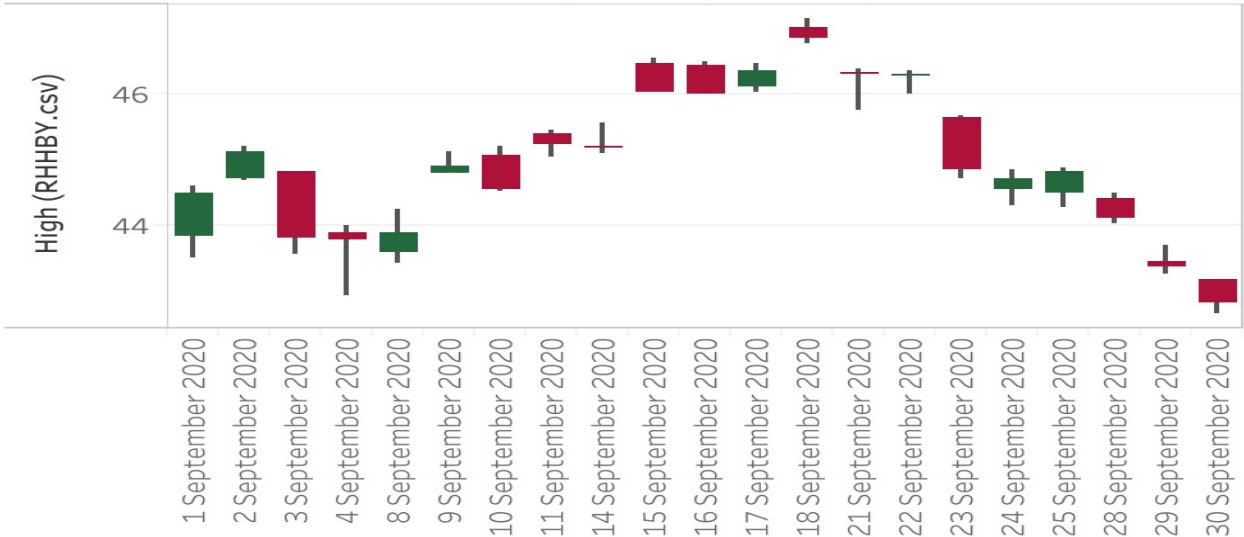
PFE

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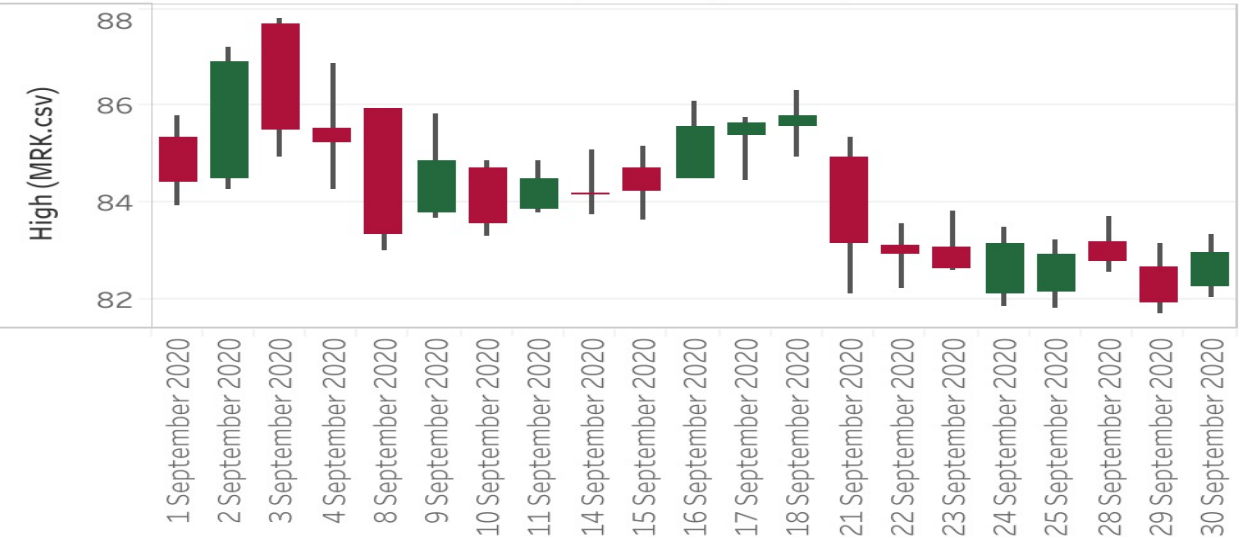
RHHBY

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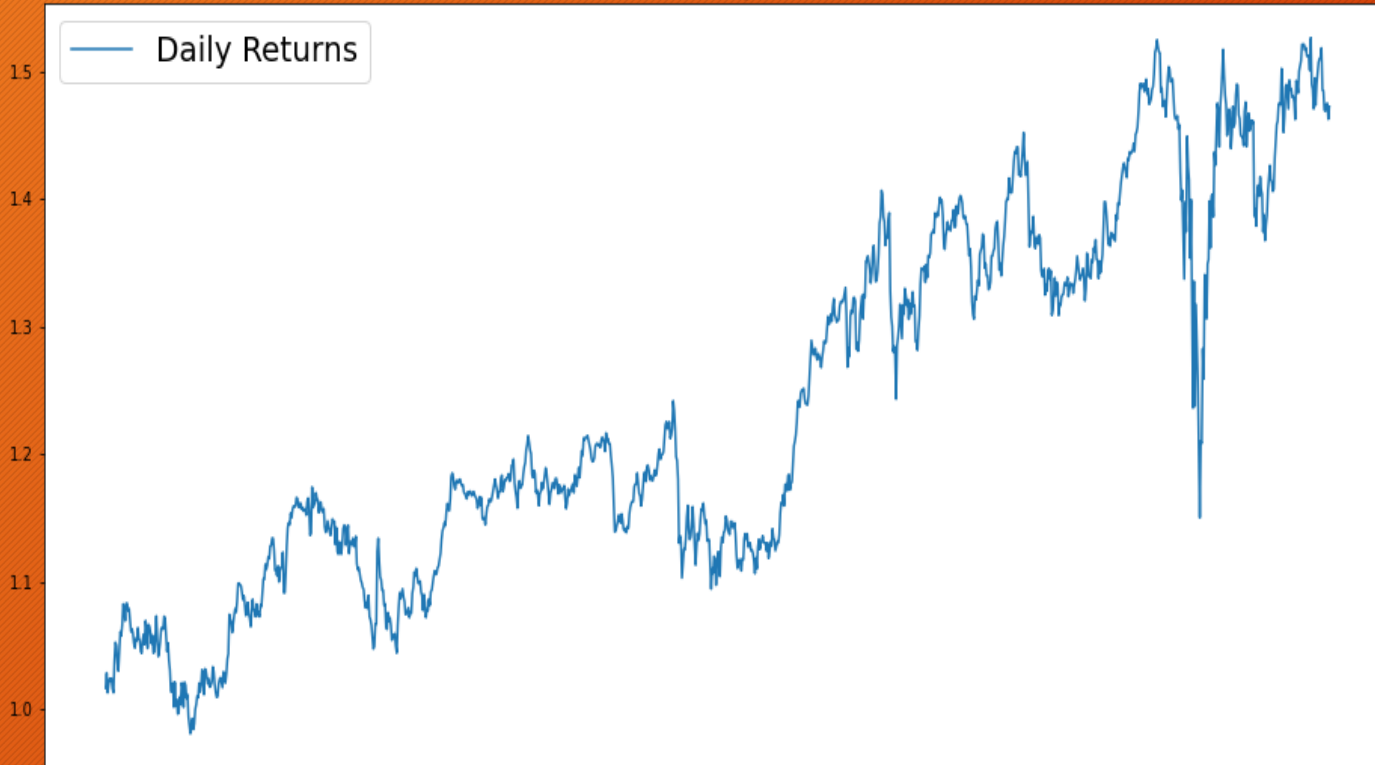
MRK

Day of Date (MRK.csv)



Mr. Patrick Jyenger's Returns

Portfolio Daily Returns



- Portfolio cumulative returns is around 118% on the last day, which is almost double in the given time.
- The risk of Mr. Patrick Jyenger's portfolio is 34.7 %.

Mr. Peter Jyenger

- Mr. Peter Jyenger
- Consistent with his attitude towards risk, he prefers high return investments
- Believes that he can still bounce back in case of any occasional losses
- Wants to invest 1 million dollars from company's cash and cash equivalents in the most high-margin stocks
- Expects high returns within 5 years for inorganic expansion of JWW

Suggested Stocks for Mr. Peter Jyenger

	AMZN	FB	MSFT	AAPL	UNH	LUV
Date						
01-10-2015	NaN	NaN	NaN	NaN	NaN	NaN
02-10-2015	0.022699	0.012314	0.021520	0.007301	0.019038	-0.000781
05-10-2015	0.020919	0.021071	0.023261	0.003624	0.006901	0.023971
06-10-2015	-0.011404	-0.012871	0.002573	0.004784	-0.030088	-0.033079
07-10-2015	0.008298	-0.004310	0.001069	-0.004761	0.003274	0.018684
08-10-2015	-0.016201	0.000758	0.013889	-0.011554	-0.003006	0.001292
09-10-2015	0.012454	0.008327	-0.007165	0.023927	0.027481	0.030444
12-10-2015	0.019248	0.010940	-0.002335	-0.004638	0.027165	0.032048
13-10-2015	-0.002345	-0.001485	-0.002340	0.001703	0.012081	-0.009704
14-10-2015	-0.007415	-0.000531	-0.004479	-0.014134	-0.015485	0.000490

Mr. Peter Jyenger's Portfolio

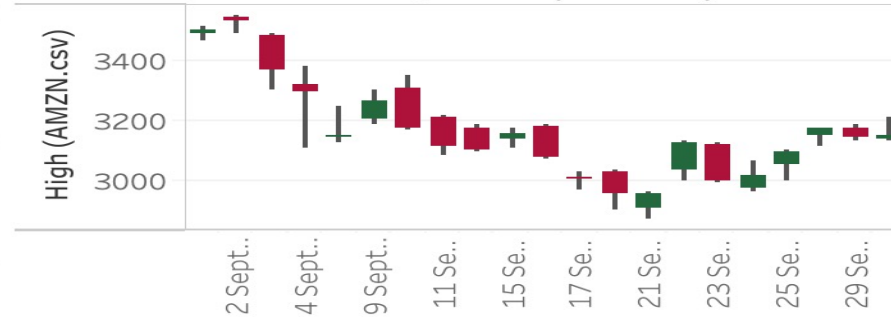
S&P500

Day of Date (S&P500.csv)



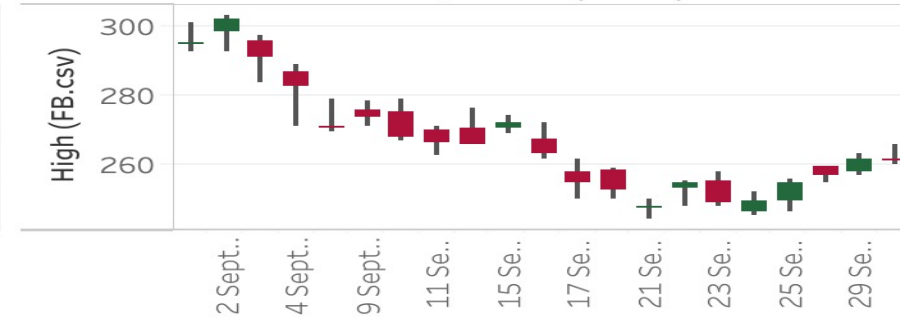
AMZN

Day of Date (AMZN.csv)



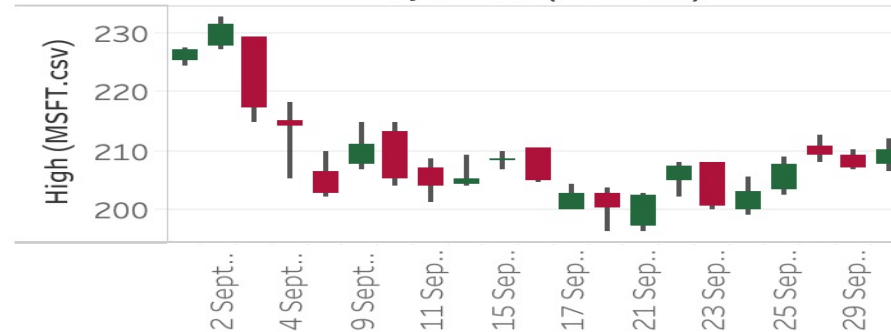
FB

Day of Date (FB.csv)



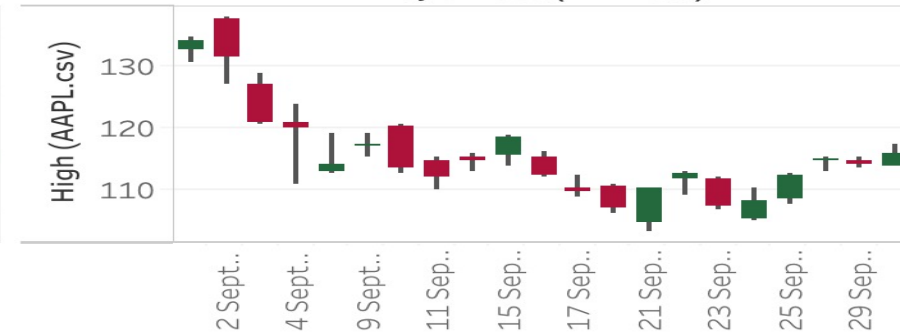
MSFT

Day of Date (MSFT.csv)



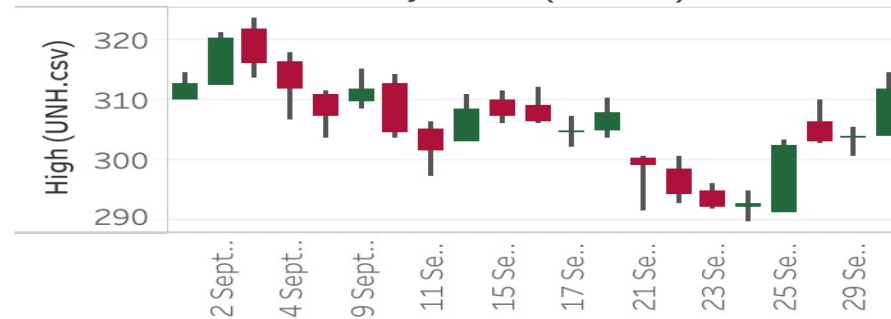
AAPL

Day of Date (AAPL.csv)



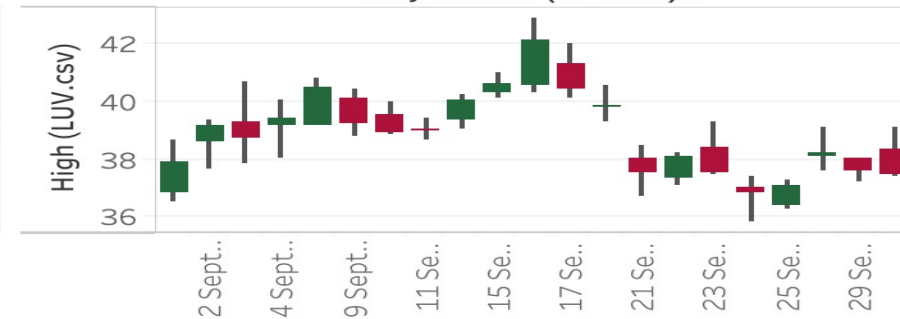
UNH

Day of Date (UNH.csv)1



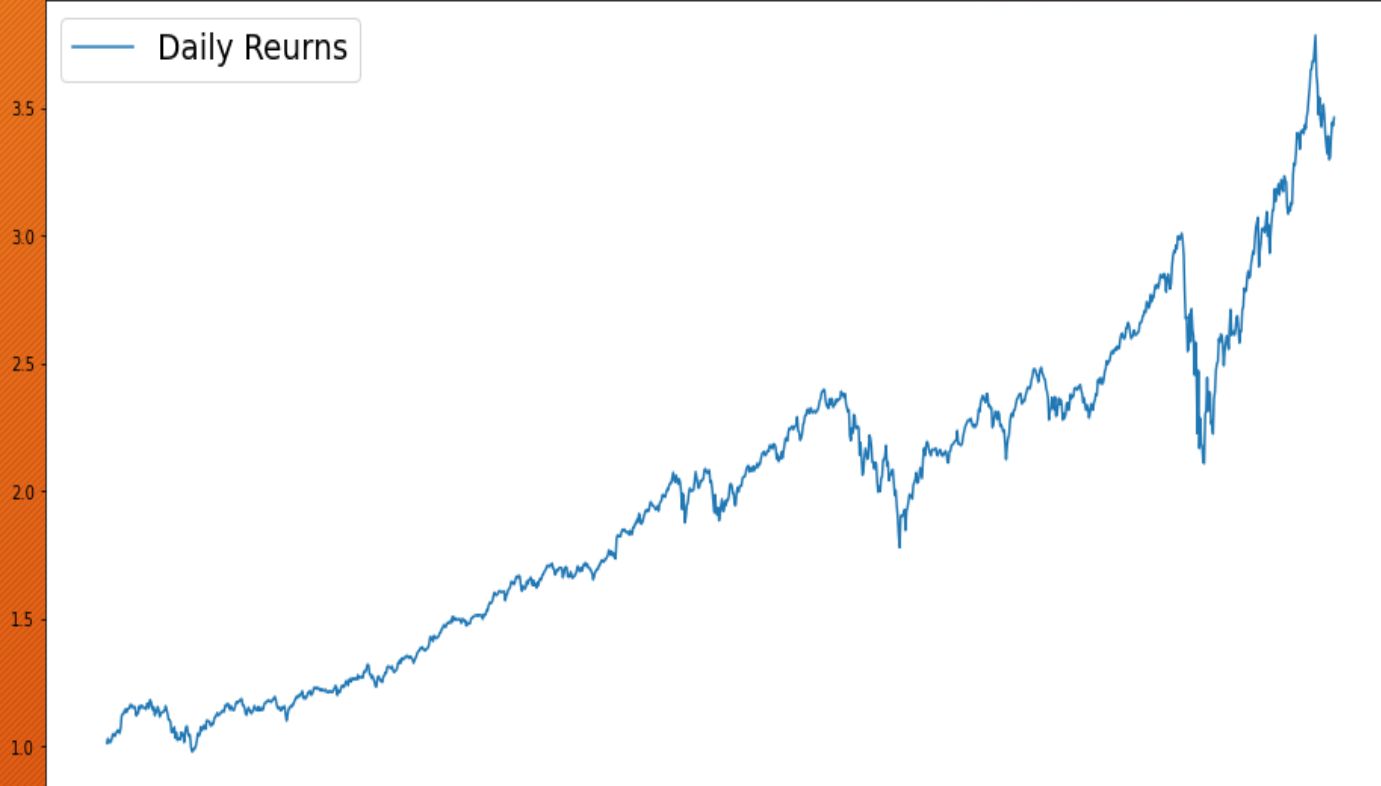
LUV

Day of Date (LUV.csv)1



Mr. Peter Jyenger's Returns

Portfolio Daily Returns



- Portfolio cumulative returns is around 756% on the last day for these stocks together which is very high.
- The risk of Mr. Peter Jyenger's portfolio is 46.7%.



Thank You