STOCKS

David Schenker

Understanding Stock Metrics

NasdaqGS - Nasdaq Real Time Price • USD

Amazon.com, Inc. (AMZN) ☆ Follow ⇢ Compare

18[illegible] 2.48 (+[illegible]4%) 186.89 [illegible].11 (-0.[illegible]%)

At close: [illegible]M E[illegible] [illegible]fter hour[illegible]7.42[illegible]EDT

Valuation Measures

Annual 🔒 | Quarterly | Monthly 🔒

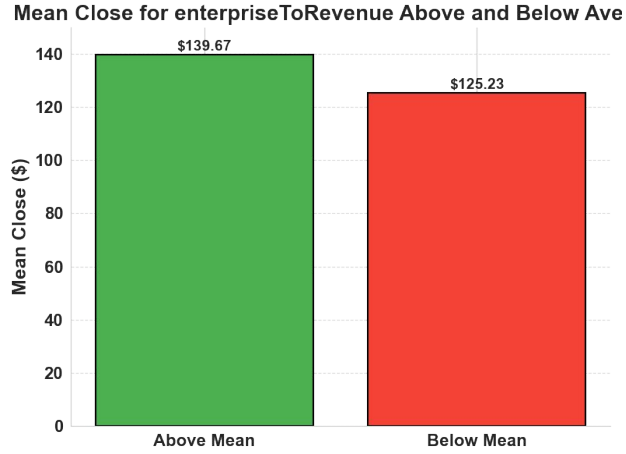
	Current	6/30/2024	3/31/2024	12/31/[illegible]3	9[illegible]/2023	6/30/2023
Market Cap	[illegible]94T	2.01T	1.88T	[illegible]57T	1.31[illegible]	1.34T
Enterprise Value	1.98T	2.06T	1.93T	1.84T	1.39T	1.42T
Trailing P/E	44.04	54.13	62.20	79.55	100.89	310.38
Forward P/E	31.25	41.49	42.55	39.53	40.49	82.64
PEG Ratio (5yr expected)	1.75	2.06	2.44	2.47	2.53	5.16
Price/Sales	3.25	3.46	3.29	2.85	2.43	2.54
Price/Book	8.19	9.28	9.30	8.62	[illegible]	8.70
Enterprise Value/Revenue	3.28	3.49	3.35	2.97	2.58	2.71
Enterprise Value/EBITDA	18.59	20.89	21.54	22.32	22.23	28.42

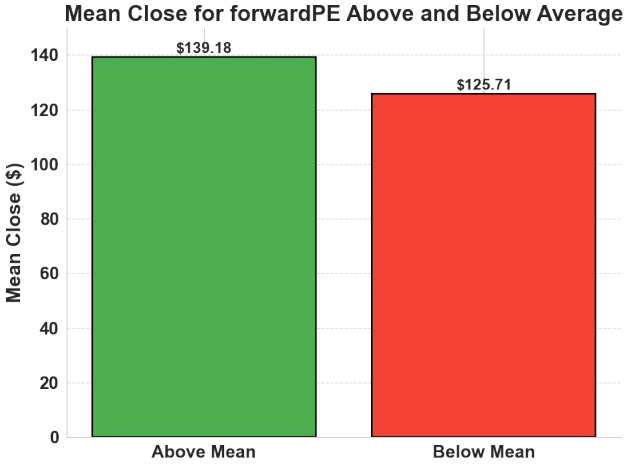
Screenshot taken from Yahoo Finance Statistics for Amazon stock

Market Cap	The total amount of cash value a company has that is being traded on the stock market
Enterprise Value	The total value of a company, often considered as the theoretical takeover price. It's calculated as the market cap plus debt, minority interest, and preferred shares, minus total cash and cash equivalents.
Trailing P/E (Price-to-Earnings Ratio)	The ratio for valuing a company that measures its current share price relative to its [illegible]share earnings over the past 12 months.
Forward P/E (Price-to-Earnings Ratio)	A version of the P/E ratio that uses forecasted earnings for the next 12 months. It gives insight into expected future growth.
PEG Ratio (5yr expected) :	The Price/Earnings to Growth ratio of [illegible]s a company's [illegible]atio to its expected earnings growth over five years. [illegible]used to gauge a [illegible] value while considering future earnings growth.
Price/Sales	A valuation ratio that compares a company's stock price to its revenues. It's useful for evaluating companies with little to no profits.
Price/Book	[illegible] ratio used to compare a company's market value to its book value. It is calculated by dividing the current closing price of the stock by the latest quarter's book value per share.
Enterprise Value/Revenue	A valuation measure that compares the total value of a company (enterprise value) to its revenue. This ratio is often used to assess whether a company is over or under-valued in relation to its revenue.
Enterprise Value/EBITDA	The ratio compares a company's enterprise value to its earnings before interest, taxes, depreciation, and amortization (EBITDA). It is often used as a valuation metric to compare the profitability of similar companies.

WHAT DO THESE METRICS MEAN TO US?

Metrics Causing Significant Difference?





Only in **THREE (3)** of the 8 metrics that Yahoo displays do we see a significant difference* when dividing the data my the metric mean.

Only 6 out of the total 20 different metrics I tested

*Hypothesis Tests were performed with a confidence level of 5% (0.05)

The Big 3:

- Enterprise Value/Revenue

- Price/Sales Ratio

- Forward P/E

Others:

- Trailing EPS
- Forward EPS
- Return on Equity

Let's Use Them Anyway!
Shotgun Time!

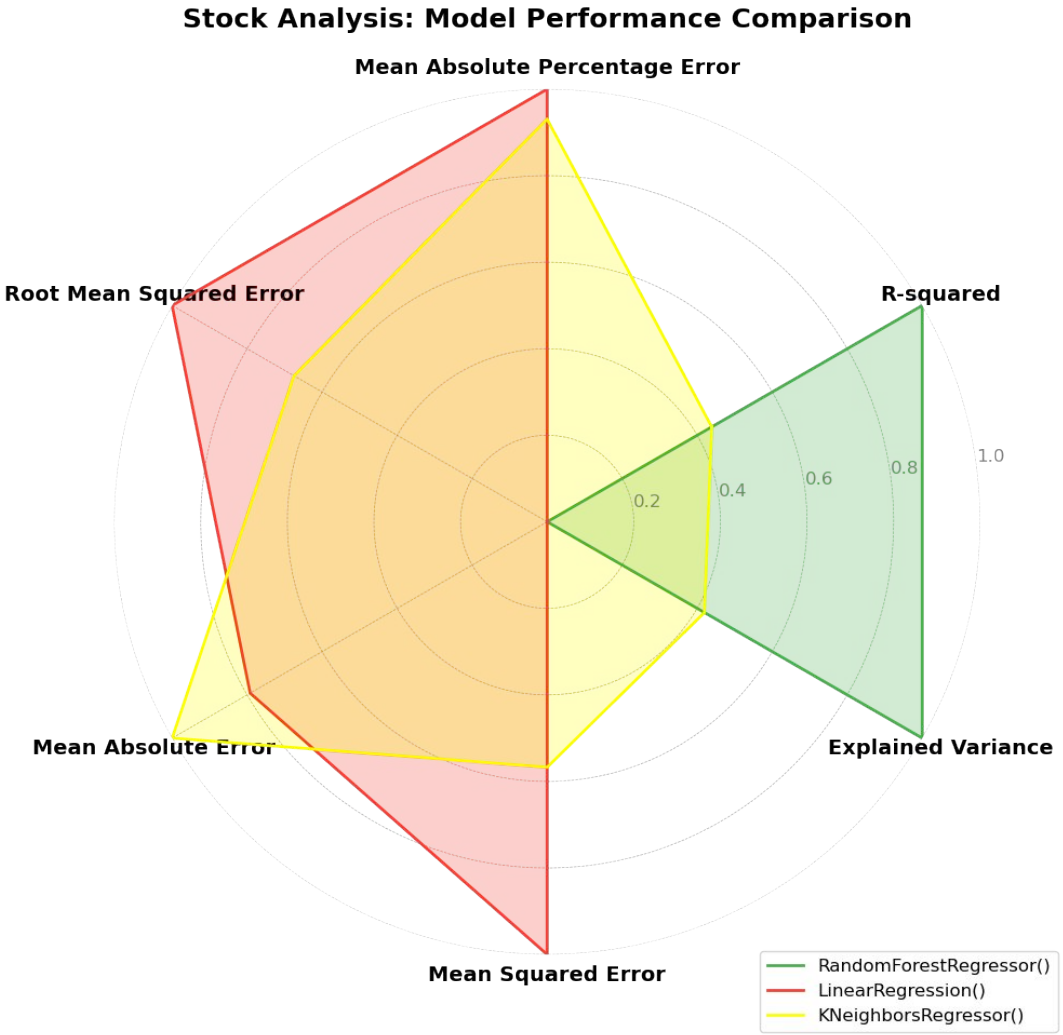
Using the metrics seen earlier (and many many more) along with some basic machine learning models, I was able to get some baseline accuracies

RandomForestRegressor seems to be **REALLY GOOD!!!**

KNeighborsRegressor is so-so

Linear Regression is **BAD!!!**

Issue: The **RandomForestRegressor** model doesn't work so well when trying to predict this a week's worth of stock data

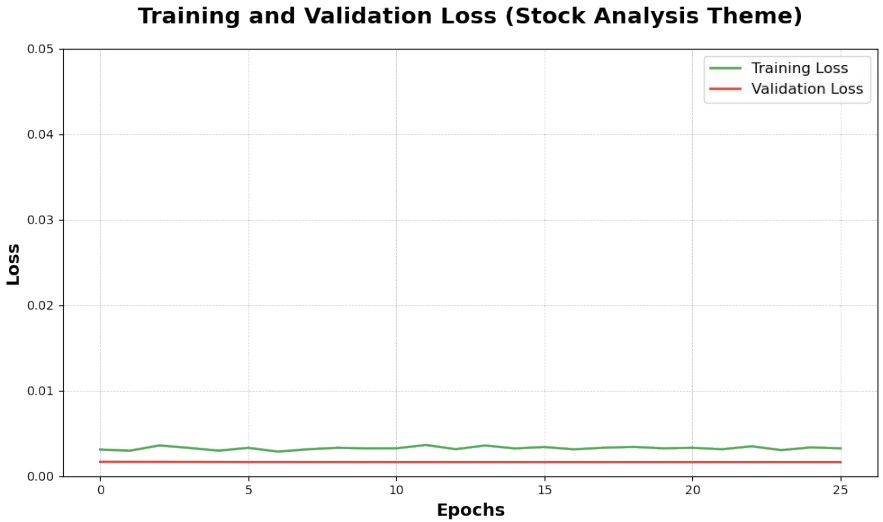


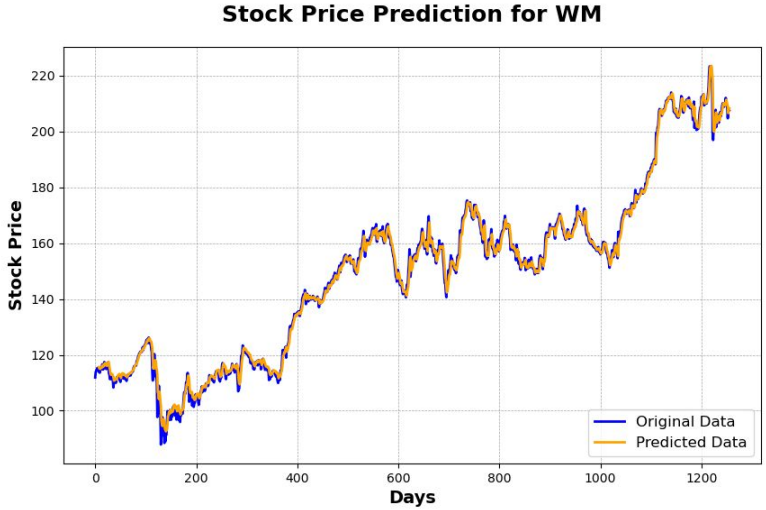
My Sequential Model

GOAL: Build a cheap sequential based model that can be fit and trained on historical data and then use the same model to predict future data.

Layer (type)	Output Shape	Param #
lstm_4 (LSTM)	(None, 7, 64)	16896
bidirectional_2 (Bidirectional)	(None, 128)	66048
dense_1 (Dense)	(None, 64)	8256
dropout_4 (Dropout)	(None, 64)	0
dense_2 (Dense)	(None, 1)	65

Total params: 91,265
Trainable params: 91,265
Non-trainable params: 0

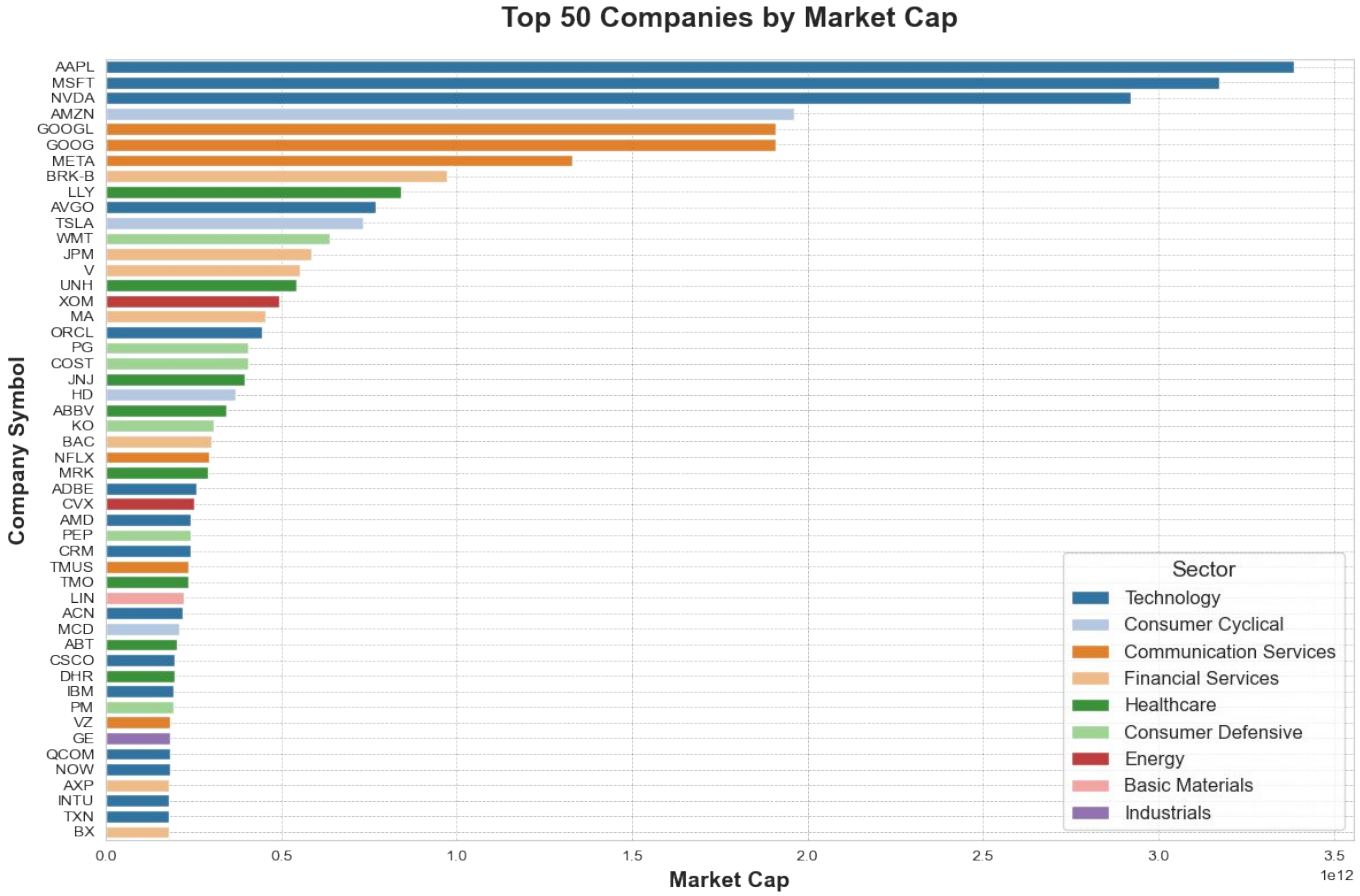




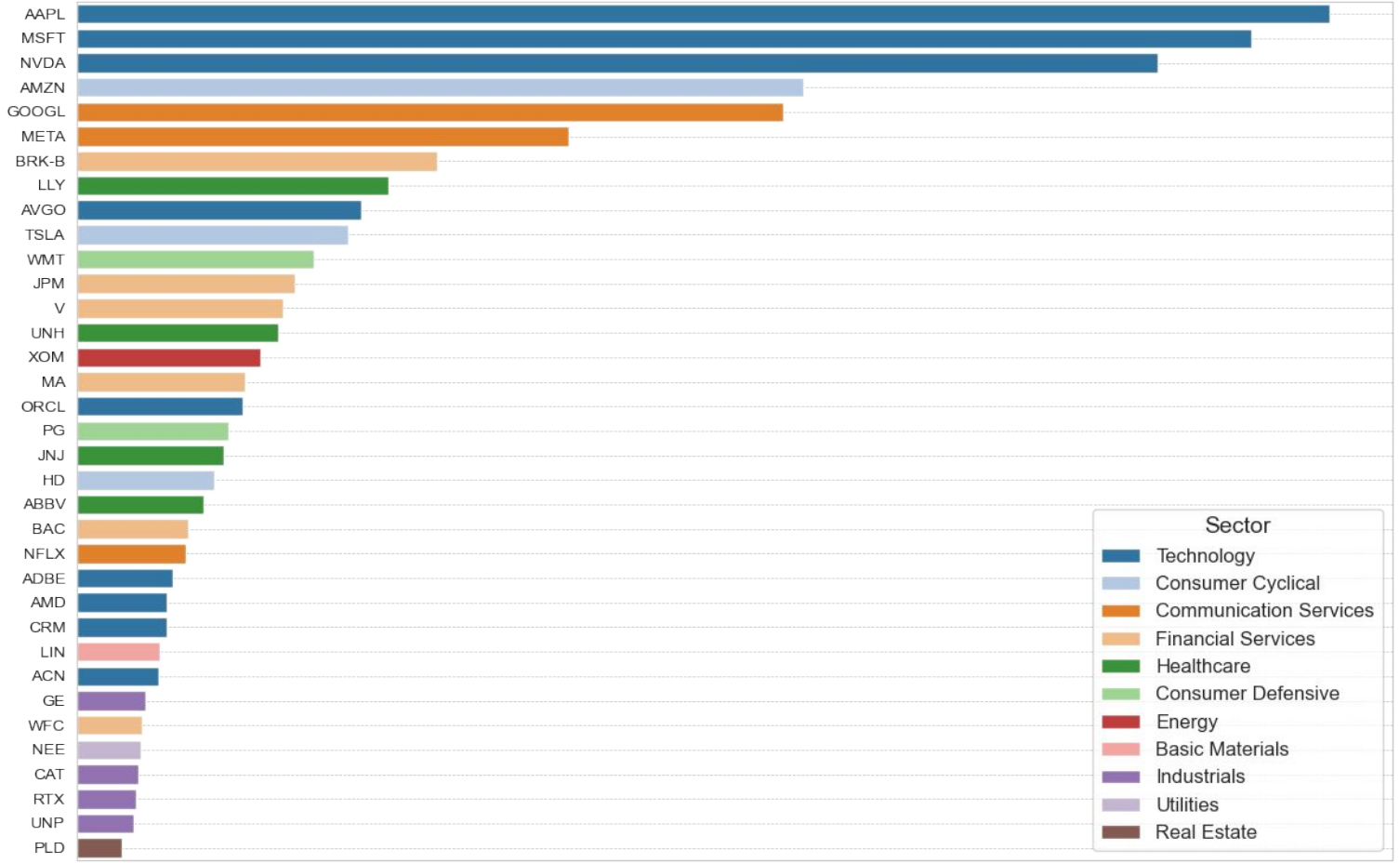
Building a Diversified Portfolio

I looked at all the stocks on the S&P 500 and evaluated each of them based on Market Capitalization
I also wanted a good mix of different sectors.

I don't actually expect you to read all this and know all those tiny symbols



My 35 Companies For a Diversified Portfolio




amazon
Microsoft
NVIDIA
J.P.Morgan
Berkshire Hathaway
Lilly
VISA
P&G
EXXON Mobil
mastercard
ORACLE
THE HOME DEPOT
UnitedHealth Group
abbvie
accenture
CAT
UNION PACIFIC
RTX
AMD
WELLS FARGO
NEXTera ENERGY

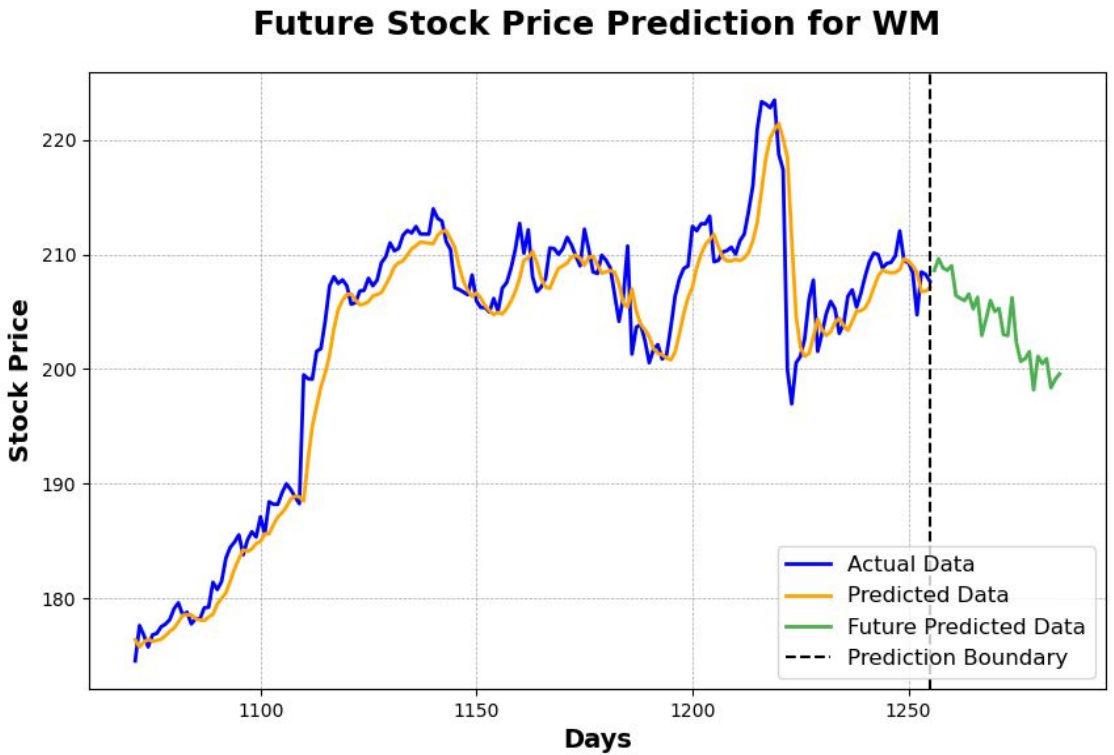
Outcome and Predictions

Using the model I was able to generate data for the next 30 days

Is it 100% accurate? → **No**

Is it mostly accurate? → **We don't know yet**

So What Do We Do Now? → Let's find out!



Conclusion - Do’s and Don’ts

DO: Research before purchasing any amount of stock.

DO: Analyze my model and attempt to make improvements (if it's perfect, we can all get rich!)

DON’T: Empty your savings and invest in a random stock that my model says will rise

DON’T: Assume my model is the best iteration possible

Thank You!

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