Modeling Ethereum Prices

Cameron Ladd

What is Ethereum?

- Ethereum is a super cool online database that is shared across a BUNCH of different computers

- Each transaction has a unique identity

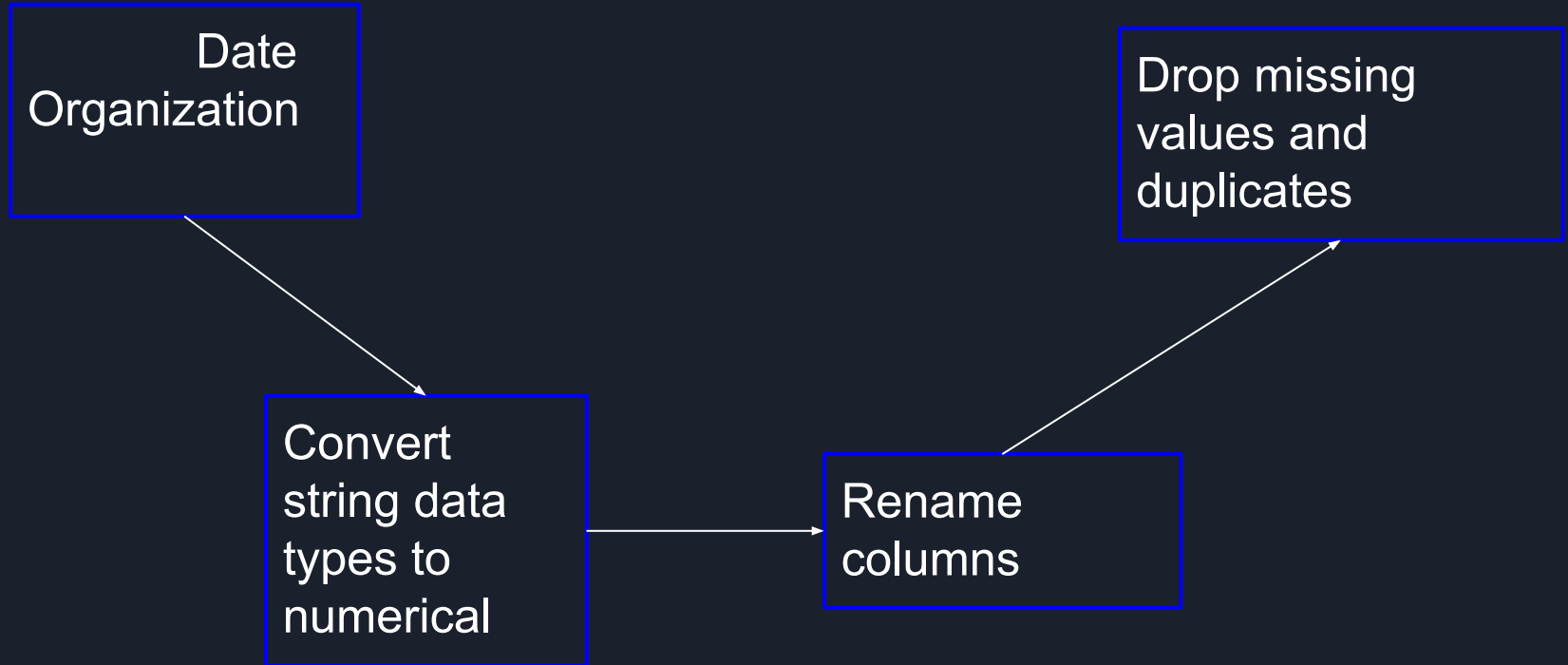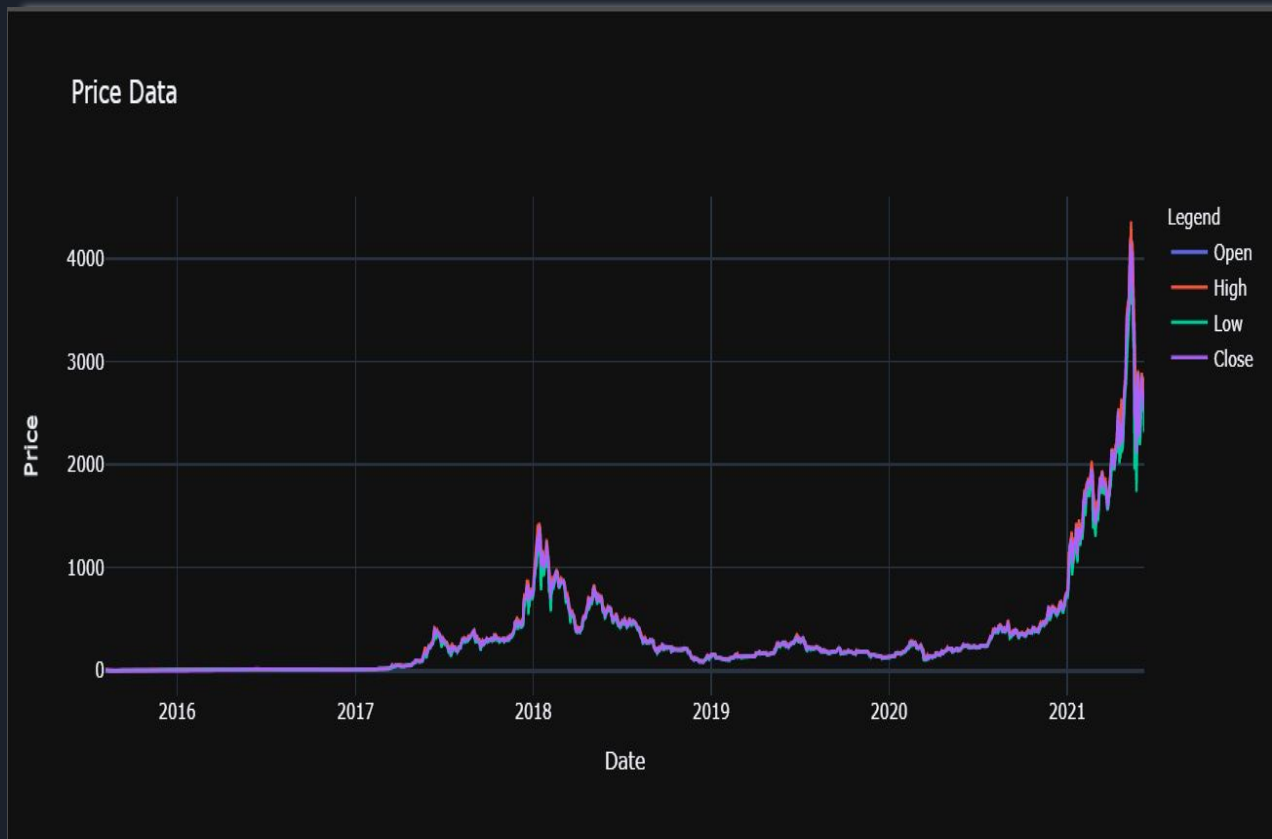- This creates transparency and security

Data Source and Features
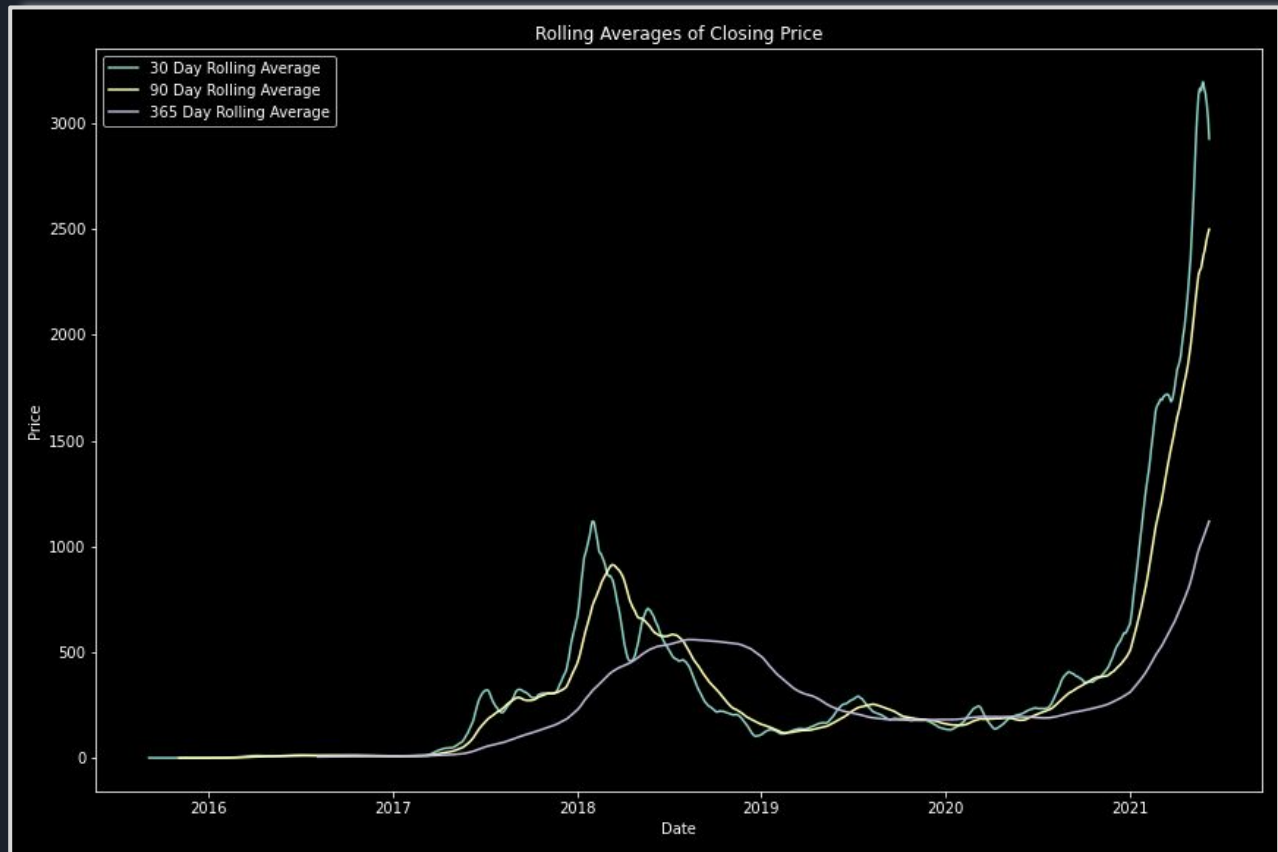
CoinMarketCap.com

- Close Price
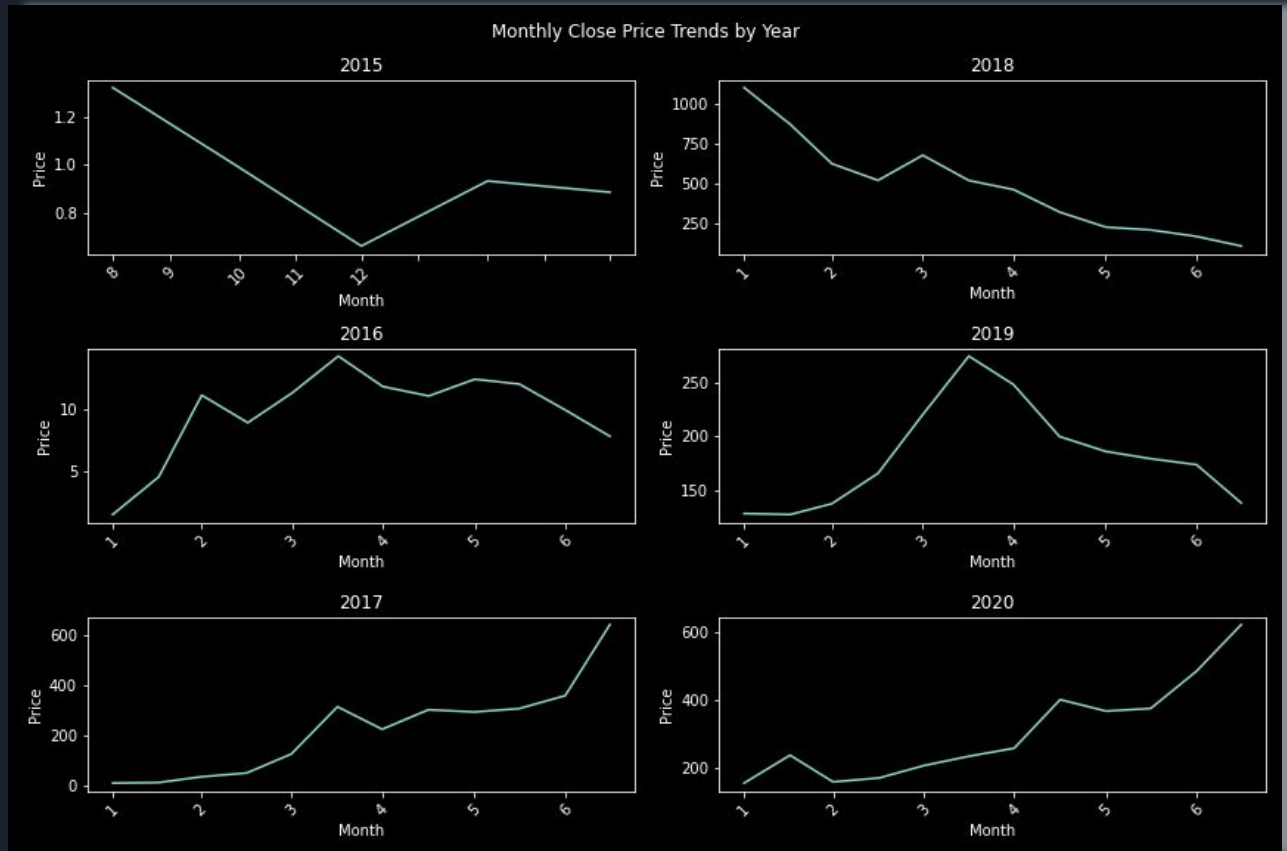
- Volume

Data Preprocessing

Price Movement

Rolling Averages

Seasonality

Model Evaluation

Model	RMSE Value
Random Walk	493.49
Auto - ARIMA	1053.25
Prophet (No exogenous)	506.81
Prophet (Exogenous)	277.92
LSTM	135.55
BEST MODEL	LSTM

LSTM Prediction Graph

LSTM Model Prediction vs True Values
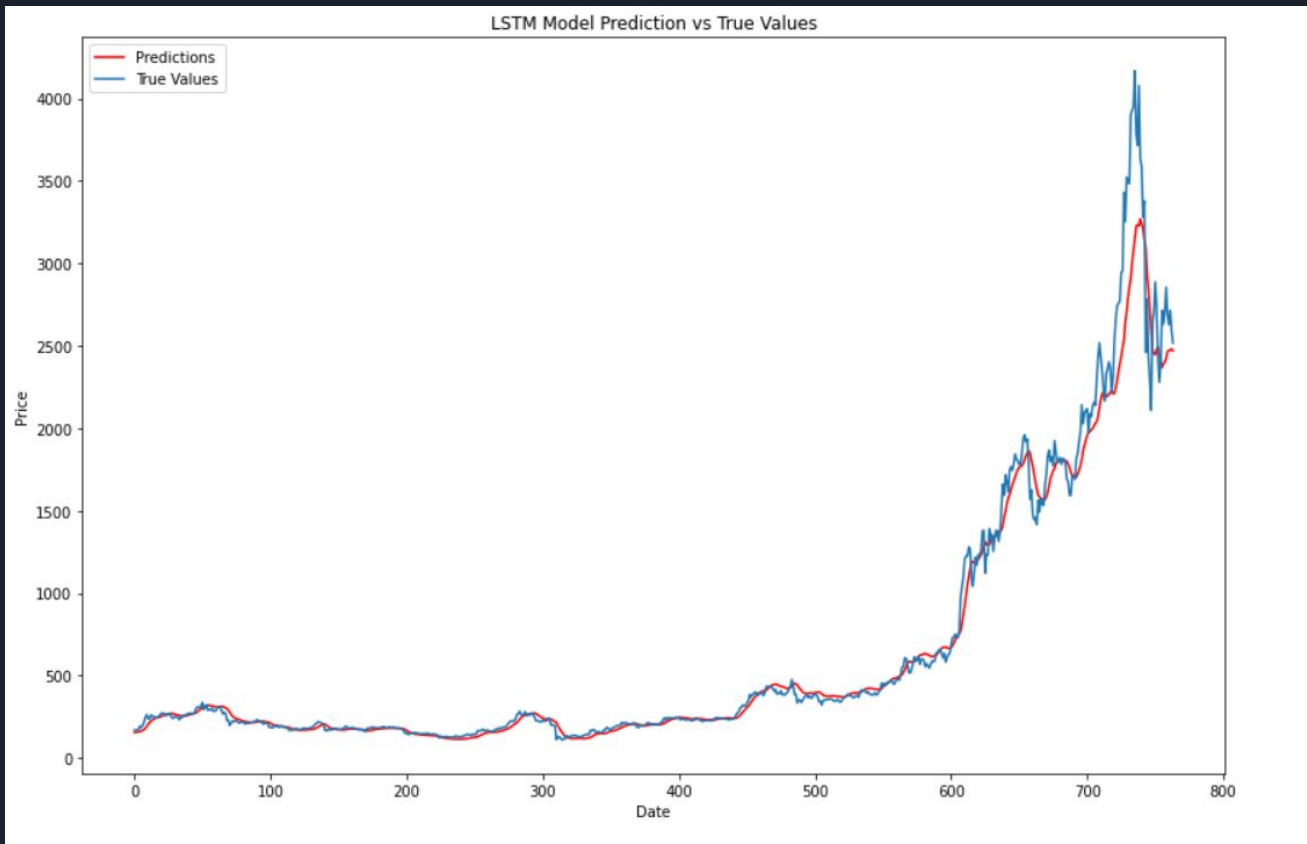
Trading Strategies for Comparison

Simple Moving Average Strategy

- Use intersections (Above = Buy, Below = Sell)
- Slow Period
- Fast Period

Buy-and-Hold

- Buy and never sell
- HODL

Profit Earned from each Strategy

Initial Investment: $100,000

Strategy	Profit
LSTM	$173,357.79
SMA	$828,790.12
Buy and Hold (HODL)	$853,250.79

Conclusion

HODL!!!

- Both the LSTM model and SMA model underperformed in comparison

Further Ideas/Plans

- More tailored trading strategy for LSTM

- Add exogenous variables

Contact Info

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