Cryptocurrency Analysis

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Background

- Cryptocurrencies, or crypto are digital assets used for transactions and for investment purposes all around the world.

- **Purpose**
  To predict the trends of 5 different Cryptocurrencies by using past performance data in order to locate the most valuable investment.
  Currencies Utilized:
    - -Bitcoin
    - -Dogecoin
    - -Tether
    - -Etherium
    - -XRP

- **Goal**
   To predict the trends of 5 different Cryptocurrencies by using their past performance data in order to locate the most valuable investment.

Data Collection   And   Machine Learning Model

- Jupyter Notebook
- Data Source: Yahoo Live Finance Data
  Day-to-day pricing for the 5 currencies from 2017 to 2022.
  Data is stored as csv file for visualizations.
- Database: MongoDB
  The data is transformed and stored in Mongodb.
- ML Model: Random Forest Regressor

BitCoin (BTC)

- Created in 2009 with prices that exceeded $60,000 in 2021 by an unknown user/users with the pseudonym Satoshi Nakamoto.
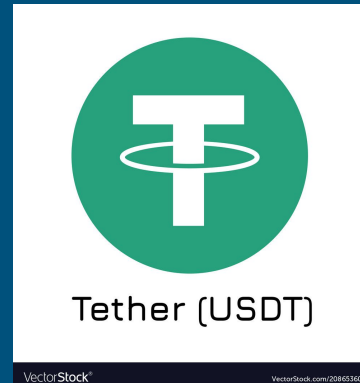- To this day nobody knows if it is a group or an individual that created the currency

Dogecoin (DOGE)

- Created in 2013 by Jackson Palmer, an Adobe Project Manager, as part of a satirical take on the crypto market.
- In 2014, the Dogecoin community raised $55,000 to sponsor a NASCAR driver Josh Wise and he covered his car entirely in Dogecoin and Reddit alien images

Tether (USDT)

- Created in 2014, it was first issued as a dollar-backed digital currency. Also known as "stable coin" dues to its connection to real world assets such as the US dollar in order to maintain its value.

Tether (USDT)

Ethereum (ETH)

- Launched in 2015 by Buterin and Joe Lubin, founders of the blockchain software company ConsenSys.
- Their website states that Etherium is "a technology used for building apps and organizations, holding assets, transacting and communicating without being controlled by a central authority"

XRP

- Backed by a company known as Ripple, XRP was released in 2012.
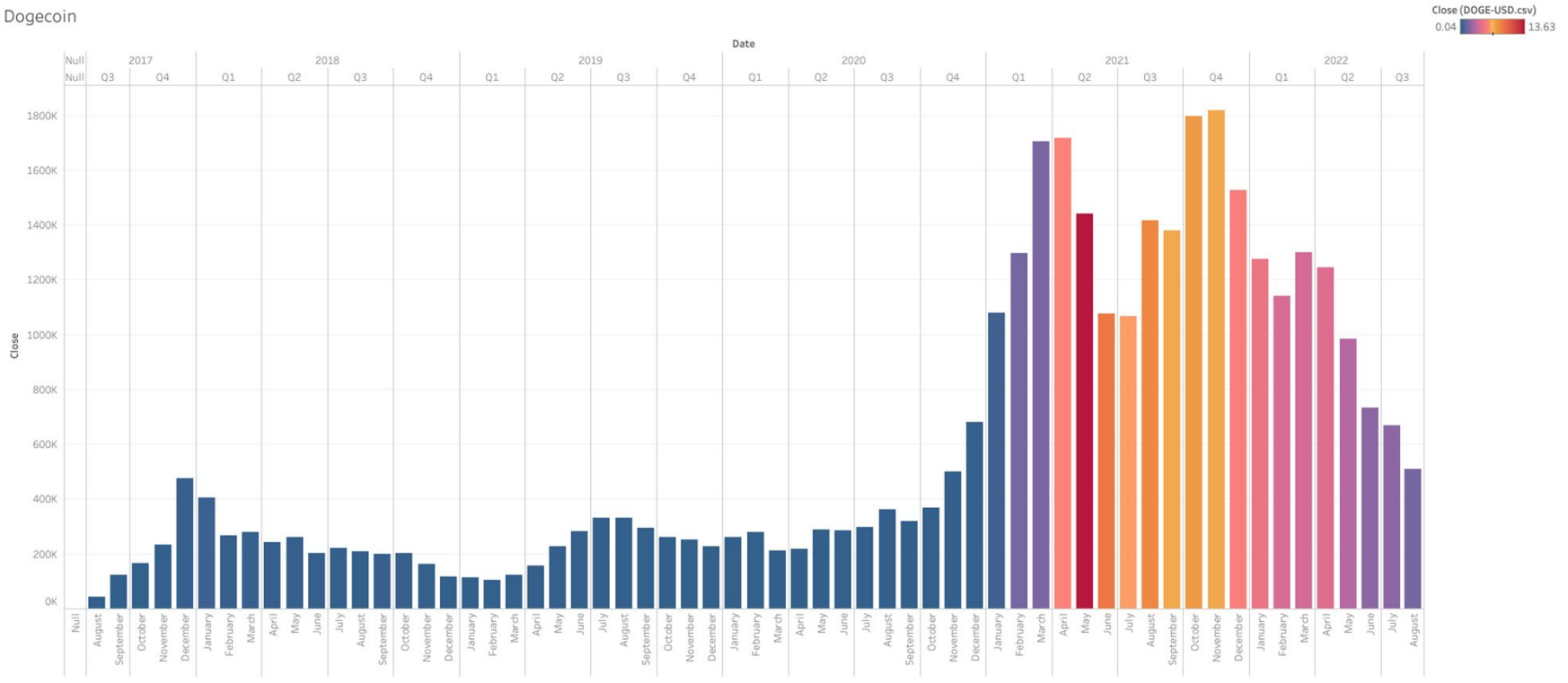- Only about 40% of XRP tokens are in circulation.

Results

Dogecoin

Accuracy rate = 96%

Prediction: 0.0034

Actual: 0.0014
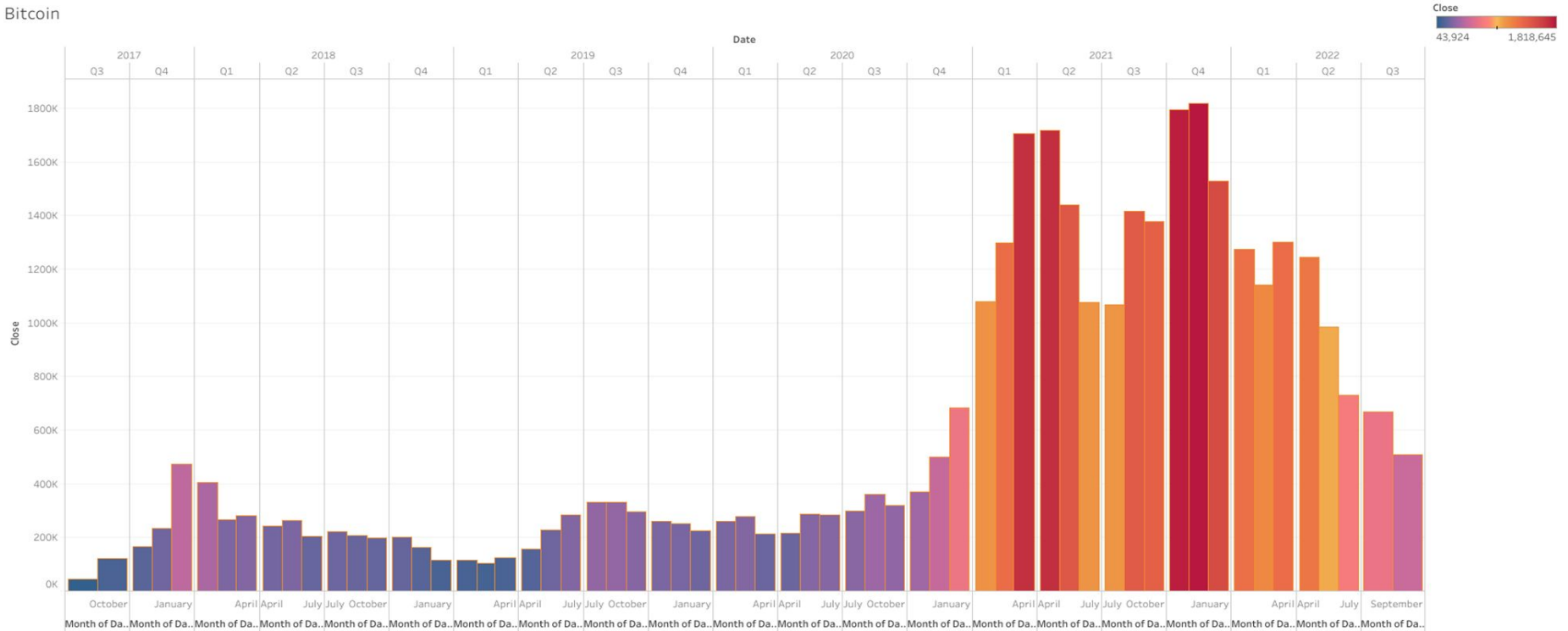
Dogecoin (DOGE)

Results

Bitcoin

Accuracy rate = 96%

Prediction: 7778.24

Actual: 4578.77
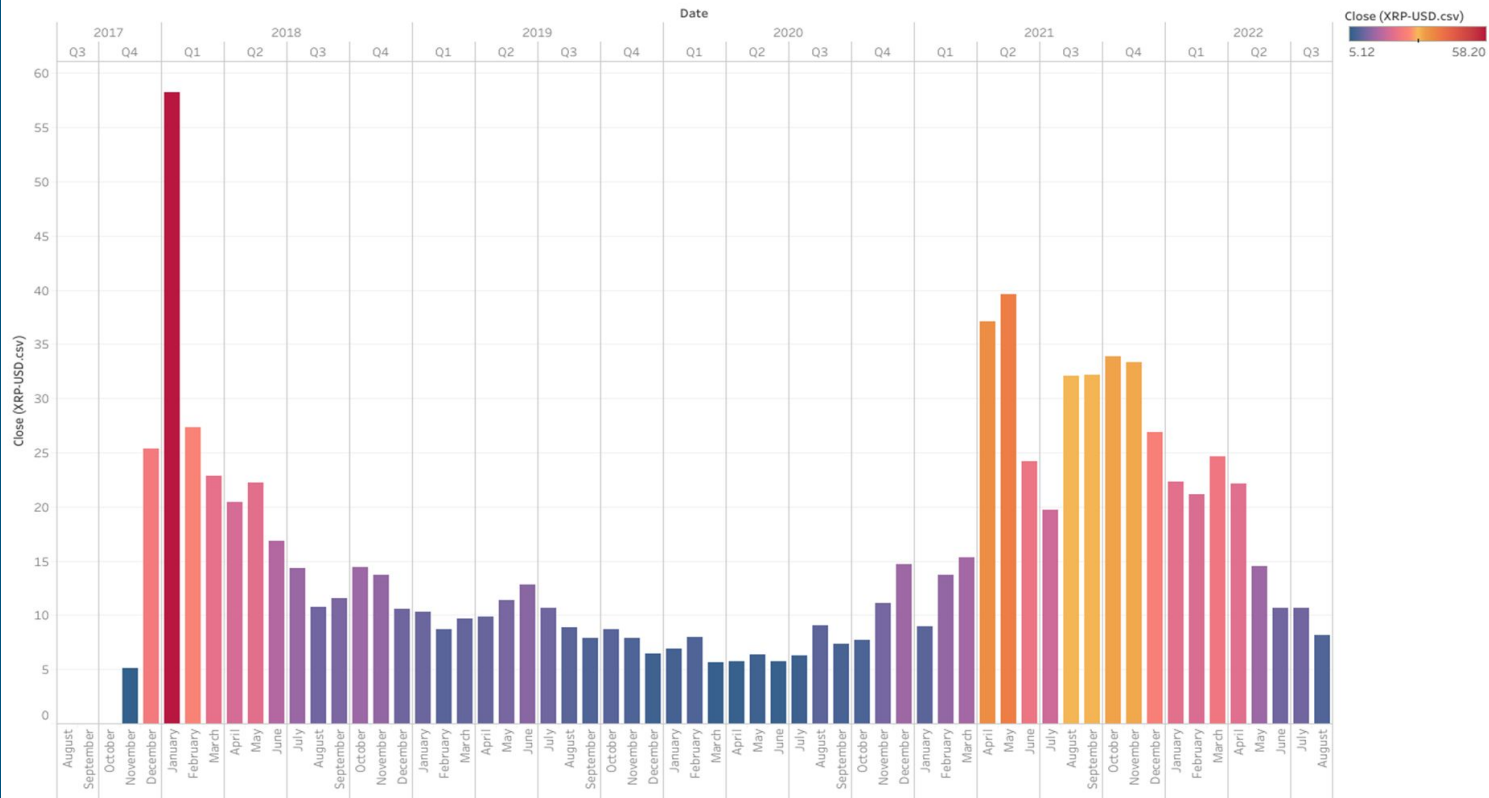
Bitcoin (BTC)

Results

XRP

Accuracy rate = 89.33%

Prediction: 0.2781

Actual: 0.2175

XRP
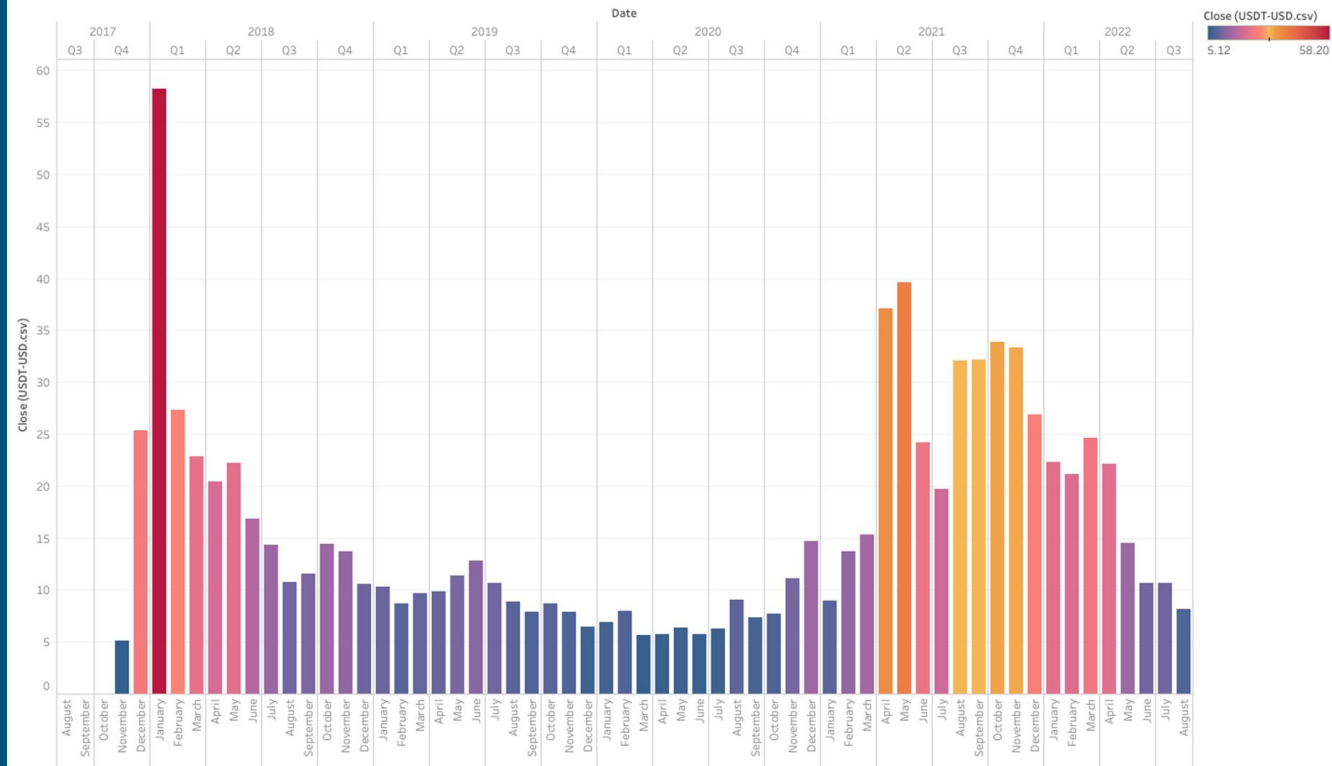
Results

Tether

Accuracy rate = 52%

Prediction: 0.0485

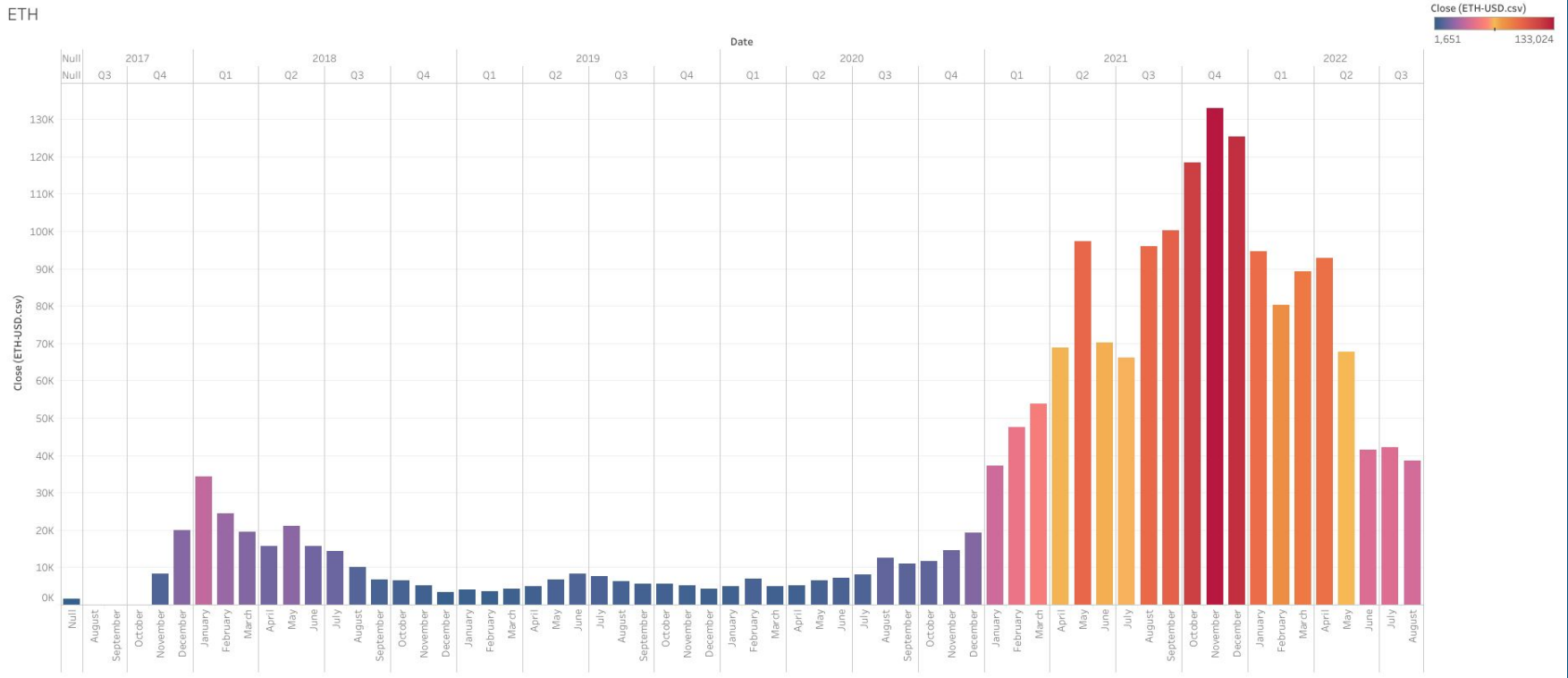Actual: 1.008

Tether (USDT)

Results

Ethereum

Accuracy rate = 95%

Prediction: 273.05

Actual: 320.88

Ethereum (ETH)

Conclusion

- Predict trends of 5 different Cryptocurrencies by using past performance data in order to locate the most valuable investment.
- Currencies Utilized:
  - Bitcoin
  - Dogecoin
  - Tether
  - Etherium
  - XRP

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