

# CMPS 287 Project: Phase 1

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22 February 2021

## 1 Topic

Cryptocurrency Price Prediction using real-time data, official reports, influential figures, and market ambiance.

## 2 Cryptocurrencies

Due to time limitations and the complex nature of the project, we will narrow our focus to two cryptocurrencies: Bitcoin and Ethereum. These are the two largest cryptocurrencies in terms of market capitalization representing over **1.225 trillion dollars** in combined value.

## 3 Problem

The cryptocurrency market is an unstable market due to the rapid changes and some affective factors. News is one of the factors that can change the whole market, for example, Wall street statements, Elon Musk tweets, European Central Bank statements, and other public figures. Another important factor is the adoption of these currencies, or in other words the public ambiance towards this technology.

## 4 Impact/Significance

Achieving a good accuracy for stock market prediction will have a significant impact on the decisions of cryptocurrency investors leading to potential increased profits. Additionally, our model can be used by the government in policymaking to regulate the market and financial researchers towards more informed studies of the cryptocurrency market behavior. Finally, low and middle-class people are

more involved in investing due to the increased adoption of on-demand investing applications like Robinhood, which lowers the barriers for such communities to invest. However, these communities are more vulnerable to market changes, increasing the importance of our project.

## 5 Resources

- Cryptocurrency Price Prediction Using Tweet Volumes and Sentiment Analysis
- Investigating the Problem of Cryptocurrency Price Prediction: A Deep Learning Approach
- Stock Forecasting using Machine Learning
- Short-term stock market price trend prediction using a comprehensive deep learning system
- Stock Price Prediction Using Machine Learning and LSTM-Based Deep Learning Models