

The background features a dark blue-grey gradient with a subtle hexagonal grid pattern. Various icons are scattered across the grid, including a candlestick chart, a cloud with a download arrow, a hand holding a money box, an hourglass, a magnifying glass over a person icon, and a bar chart. The main title is centered in a large, white, sans-serif font.

# Stock & Crypto Predictions

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Created by Sarah Azad, Edward Kim, Hemali Shah, Taiqin(Bryan) Wu, and Zan Zaman

# Introduction

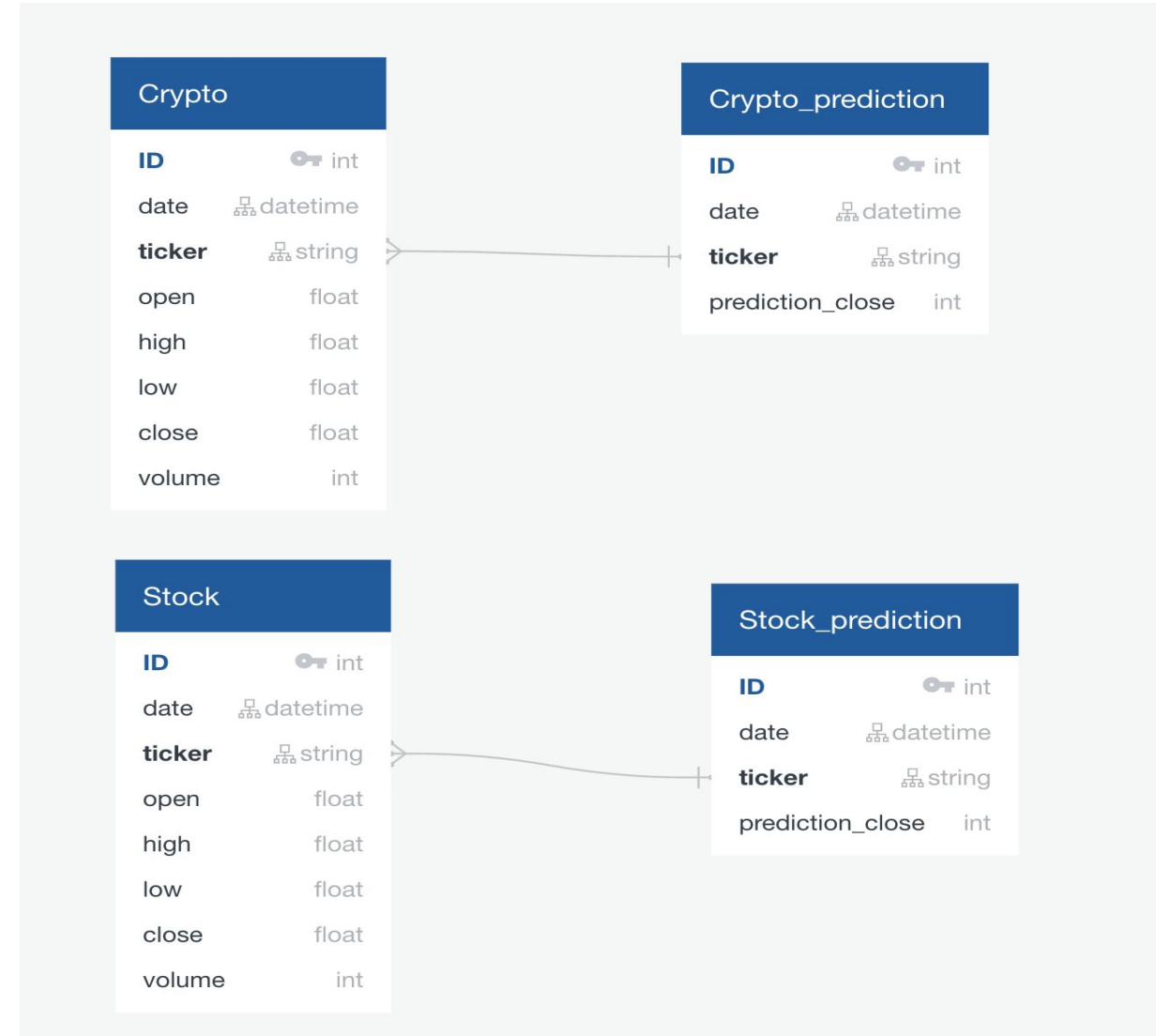
Since the Pandemic, stock markets and cryptocurrency have shown different patterns. The stock market was consistently high and broke records, however cryptocurrency price have drastically fallen. Since cryptocurrency and blockchain were touted as the future for transactions, we were highly interested in learning about these topics.

The goal of this project is to implement a machine learning model that can predict five cryptocurrencies and five stock prices.



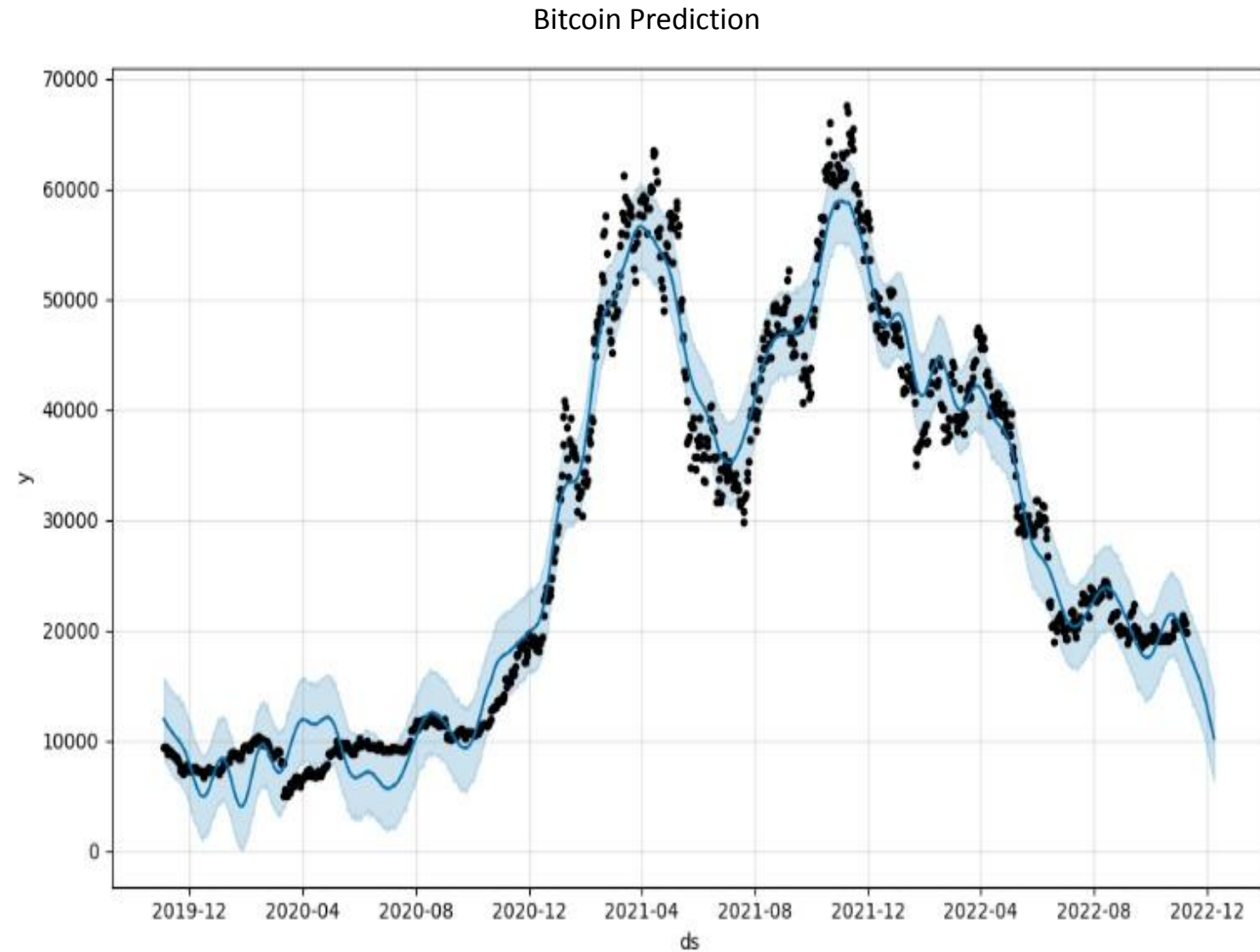
# Data Collection

- **Data Source:** Yahoo Live Finance Data
- **Database:** Postgres/SQL with AWS
- Entity Relationship Diagram



# Machine Learning

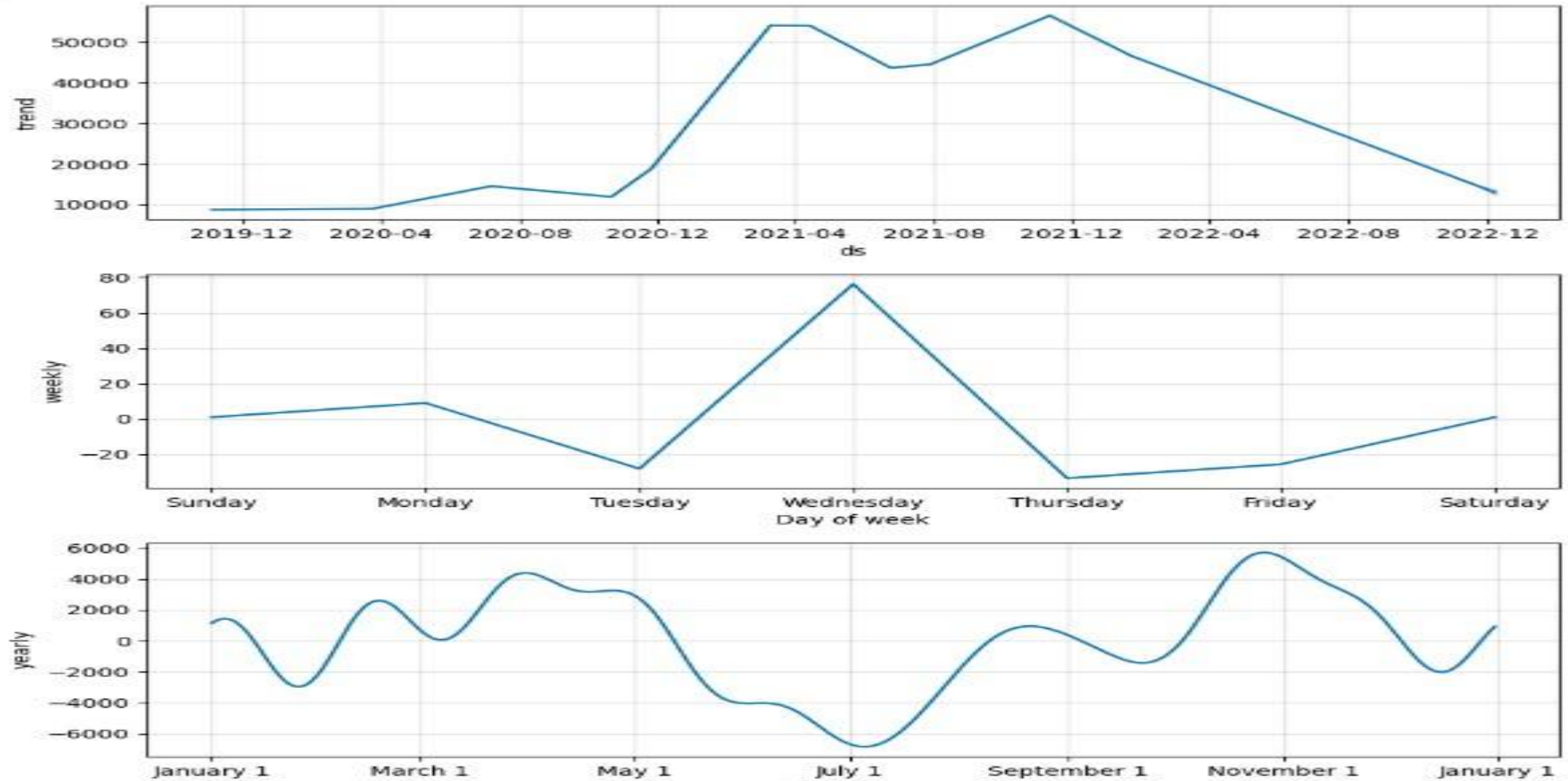
**Facebook Prophet** - Facebook Prophet is an opensource software released by Facebook's Core Data Science team. The software can help forecasting time series data based on an additive model where non-linear trends are fit with yearly, weekly, and daily seasonality, plus holiday effects. Prophet is robust to missing data and shifts in the trend, and typically handles outliers well.





# Machine Learning

Bitcoin Prediction



# Dashboard

Deep learning

[HOME](#)

[STOCKS](#)

[CRYPTOS](#)

[ABOUT](#)

## INDEX

AAPL



1m 6m all

Prediction Graph for Apple



# Demo of Dashboard

# Dashboard

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[HOME](#) [STOCKS](#) [CRYPTOS](#) [ABOUT](#)

### Stocks

Daily Price

AAPL	\$149
TSLA	\$198
META	\$105
GOOGLE	\$97
AMZN	\$102

1M 6M ALL

Prediction Graph for Apple



Daily Prediction

**\$150**

Accuracy rate of 81%

Weekly Prediction

**\$148**

Accuracy rate of 83%

Monthly Prediction

**\$138**

Accuracy rate of 87%

Yearly Prediction

**\$168**

Accuracy rate of 87%



# Dashboard

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HOME STOCKS CRYPTOS ABOUT

### CRYPTOS Daily Price

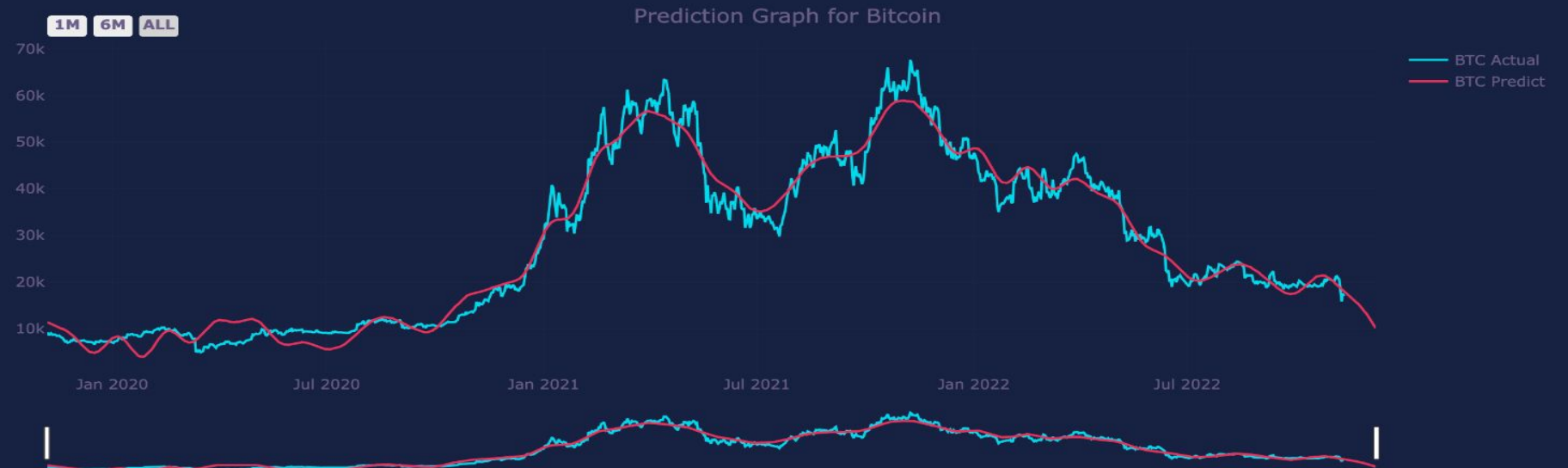
**BTC** \$16,018.80

**ETH** \$1,183.59

**ADA** \$12.59

**XRP** \$0.34

**BNB** \$271.10



### Daily Prediction

**\$20,102**

Accuracy rate of 85%

### Weekly Prediction

**\$21,942**

Accuracy rate of 88%

### Monthly Prediction

**\$22,109**

Accuracy rate of 79%

### Yearly Prediction

**\$40,294**

Accuracy rate of 81%

# Dashboard

## Deep learning

[HOME](#) [STOCKS](#) [CRYPTOS](#) [ABOUT](#)

## ABOUT US

We are a small team interested in using the machine learning models to predict the future price of stock and crypto markets. Our goal is to create a tool to help investor and trader to gain confidence when they are trading. This new technology will be the next generation of trading.

The models we are using are:

The Facebook Prophet can help forecasting time series data based on an additive model where non-linear trends are fit with yearly, weekly, and daily seasonality, plus holiday effects; we used this as an additive to our Machine Learning model.

The second model we are using is LSTM. This model is a recurrent neural networks designed to remember data for a longer period. We will start training an LSTM model for predicting crypto and stock prices, we will split the data into training sets and test sets.



## Member Name



Edward Kim



Hemali Shah



Sarah Azad



Taiqin Wu



Zan Zaman

## Project Github

# Questions?

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# Thank You

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