**Executive Summary**

**Project Title** – Crypto Signal Provider

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**Project Description/Outline** – Build a product that users can select a Machine Learning model, set parameters that model will train on to predict crypto performance. Jupyter notebook/ Google Colab backend with calculations and plots and a streamlit.io front end with plots and charts or dataframes, including a Signal provider via twilio.

This product relates to Fintech and Machine Learning because young investors today are interested in Crypto/Digital Assets as investment vehicles. Machine Learning Algorithms and how they can be used to predict price performance is a product that investors will pay for. I know this because I currently pay 80$/ month for such a product.

**Research Questions to Answer** –

1. What is the most accurate ML model to use to predict asset price?
2. What signal was the best? SMA, EMA, RSI, MACD ?
3. What are good features to train the different models with and how to go about getting those datasets.

**Next Steps-**

The models that we used varied in accuracy of how well they performed, predicting the closing price of the top ten Digital Assets by Market Cap. One observation that I made was the lack of robust features that I trained the Logistic Regression model on. I took a Simple Moving Average for a short window and a long window and used that to train the lr model to. Looking back I recognize how this feature is not a great feature for a lr model. In the future I think that sentiment analysis would be a good feature for a lr model. Using the Twitter API to collect numbers of people that mentioned keywords like ‘Bullish’ or ‘Bearish’ along with ‘Bitcoin’ or ‘Ethereum’ could be a great feature to train a model with. Moving forward with this project that's what I would do.

Another next step could be integrating a signal providing feature to this product by using Twilio to push SMS messages to users when ‘Buy’ or ‘Sell’ signals are predicted.