**Crypto Price Prediction Project Specification**

**1. Objectives**

The objective of this project is to develop a web application that can predict the future prices of cryptocurrencies. The application will be able to predict prices for multiple timeframes and currencies. It will also allow users to create and save custom watchlists and receive alerts when the predicted price of a cryptocurrency reaches a certain level.

**2. Target Audience**

The target audience for this application is cryptocurrency traders and investors. The application will be useful for traders who want to make both short-term and long-term trading decisions. It will also be useful for investors who want to track the performance of their cryptocurrency investments.

**3. Requirements**

The application will be a web application that is accessible from any device with a web browser. The application will be developed using Python and the Flask framework. It will use a variety of machine-learning algorithms to predict cryptocurrency prices.

**4. Functionality**

The application will have the following functionality:

**Price prediction:** The application will be able to predict the future prices of cryptocurrencies for multiple timeframes and currencies. The predictions will be based on a variety of factors, including historical price data, technical indicators, and sentiment indicators.

**Watchlists:** Users will be able to create and save custom watchlists of cryptocurrencies. This will allow them to track the performance of their favorite cryptocurrencies.

**Alerts:** Users will be able to receive alerts when the predicted price of a cryptocurrency reaches a certain level. This will be useful for traders who want to be notified of potential trading opportunities.

**5. Data**

The application will use a variety of data sources to make predictions, including:

**Historical price data:** The application will use historical price data from cryptocurrency exchanges such as Binance and Coinbase.

**Technical indicators:** The application will use a variety of technical indicators to analyze cryptocurrency price data.

**Sentiment indicators:** The application will use sentiment indicators to measure the public's sentiment towards cryptocurrencies.

**6. Machine Learning Algorithms**

The application will use a variety of machine learning algorithms to predict cryptocurrency prices, including:

**Linear regression:** Linear regression is a simple but effective machine learning algorithm that can be used to predict cryptocurrency prices.

**Support vector machines (SVMs):** SVMs are a more complex machine learning algorithm that can be used to predict cryptocurrency prices with greater accuracy.

**Random forests:** Random forests are a type of ensemble machine learning algorithm that can be used to predict cryptocurrency prices with high accuracy.

**7. Model Evaluation**

The performance of the machine learning models will be evaluated on a held-out test set. This will give an idea of how well the models will perform on new data.

**8. Model Deployment**

Once the machine learning models have been evaluated and optimized, they will be deployed to production. This means making the models available to users so that they can make predictions about future cryptocurrency prices.

**9. Timeline**

Expected two weeks

**10. Budget**

Depends.

**11. Success Metrics**

The success of the project will be measured by the following metrics:

**Accuracy of price predictions:** The accuracy of the price predictions will be measured by comparing the predicted prices to the actual prices.

**Number of users:** The number of users who sign up for and use the application will be measured.

**User satisfaction:** The satisfaction of the users will be measured through surveys and feedback.

**Additional Suggestions**

In addition to the features and functionality listed above, you may also want to consider the following:

**Multilingual support:** The application could be translated into multiple languages to make it accessible to a wider audience.

**Integration with other cryptocurrency services:** The application could be integrated with other cryptocurrency services, such as exchanges and wallets. This would make it easier for users to use the application to make trading decisions.

**Mobile app development:** A mobile app could be developed to complement the web application. This would allow users to access the application on their smartphones and tablets.