

Table-1 : Components & Technologies:

Component	Description	Technology
User Interface	How user interacts with application	HTML, CSS, Flask
Application Logic-1	Predicting the results in the background at cloud or local system and letting user interact with it on the web	Flask frame work
Cloud Database	Database Service on Cloud	Flask
File Storage	File storage requirements	Local file
External API-1	The purpose of API is to fetch accurate data of bitcoin for our model to train and make predictions.	yfinance
Machine Learning Model	The model is built to be able to predict bitcoin values using available data	Prophet
Infrastructure (Server / Cloud)	Local server configuration and to deploy an application to the cloud	Flask, Google

Table-2: Application Characteristics:

Characteristics	Description	Technology
Open-Source Frameworks	The framework should be open-source, which means that the underlying code and algorithms are freely available to the public. This encourages collaboration, transparency, and a wider user base.	Flask
Security Implementations	Cryptocurrency-related projects need to be mindful of security issues, especially when dealing with financial data. The framework should incorporate best practices for data security and user authentication.	https
Scalable Architecture	Cryptocurrency markets can be highly volatile and require real-time analysis. Therefore, the framework should be scalable to handle large volumes of data efficiently.	google cloud
Availability	To ensure the availability of the system, it's crucial to use a reliable and redundant infrastructure.	google cloud
Performance	Continuously fine-tune the Prophet models to adapt to changing market conditions and improve prediction accuracy.	metrics

Technical Architecture:

