

Project Design Phase-I
Proposed Solution Template

Date	23 October , 2023
Team ID	Team - 592087
Project Name	Project - Time Series Analysis For Bitcoin Price Prediction Using Prophet
Maximum Marks	2 Marks

Proposed Solution Template:

S.No.	Parameter	Description
1.	Problem Statement (Problem to be solved)	Develop a robust time series forecasting model for Bitcoin price prediction using the Prophet library, aiming to provide accurate and interpretable forecasts, aiding traders and investors in making informed decisions amidst Bitcoin's high volatility.
2.	Idea / Solution description	Create a predictive model using the Prophet library for Bitcoin price forecasting by collecting and preprocessing historical data. Evaluate and fine-tune the model for accuracy, generate informative visualizations, and provide

		interpretable insights for effective decision-making by traders and investors in the cryptocurrency market.
3.	Novelty / Uniqueness	This project stands out due to its application of the Prophet library to forecast Bitcoin prices, addressing the challenges of an exceptionally volatile and non-traditional cryptocurrency market. Its focus on providing interpretable insights through visualizations and adaptability to different time intervals makes it distinctive in the field of cryptocurrency forecasting.
4.	Social Impact / Customer Satisfaction	This project contributes to informed decision-making in the cryptocurrency market, potentially reducing financial risks and enhancing returns for investors. It empowers users with accurate predictions and insights, fostering greater trust and satisfaction among traders and investors in the volatile Bitcoin market.
5.	Business Model (Revenue Model)	This business model leverages data, predictive analytics, and consulting to create revenue streams while addressing the needs of traders, investors, and cryptocurrency enthusiasts seeking reliable Bitcoin price forecasts.

		<pre> graph TD A[TWITTER/REDDIT] --> B[DATA] B --> C[PRE-PROCESSING] D[HISTORICAL DATA] --> C C --> E[SENTIMENT ANALYSIS] E --> F[RNN/LSTM/GRU] F --> G[LIVE PREDICTION] G --> H[DECISION] G --> B </pre>
6.	Scalability of the Solution	<p>The solution is highly scalable, as it can accommodate an increasing volume of users, data sources, and cryptocurrencies by leveraging cloud infrastructure, parallel processing, and automation for data collection and model deployment. It can easily adapt to growing demand and expanded datasets while maintaining forecasting accuracy.</p>