

Project Design Phase-I Proposed Solution Template

Date	8 November 2023
Team ID	Team-592889
Project Name	Time Series Analysis for Bitcoin Price Prediction Using Prophet
Maximum Marks	2 Marks

Proposed Solution Template:

Project team shall fill the following information in proposed solution template.

S.No.	Parameter	Description
1.	Problem Statement (Problem to be solved)	The objective is to develop a time series analysis machine learning model for Bitcoin price prediction to address the challenge of extreme price volatility, enabling traders and investors to make better-informed decisions in the cryptocurrency market."
2.	Idea / Solution description	The idea or solution is to design a machine learning model that leverages time series analysis and historical data to predict short-term Bitcoin prices, offering traders and investors valuable insights for navigating the unpredictable cryptocurrency market.
3.	Novelty / Uniqueness	This project's novelty arises from its adaptation to the unique characteristics of the cryptocurrency market, including blockchain analytics, sentiment analysis, regulatory dynamics, and extreme volatility handling, to provide more accurate and informed Bitcoin price predictions.
4.	Social Impact / Customer Satisfaction	<p>The project enhances customer satisfaction by reducing financial risk, promoting inclusivity, and fostering market stability in the cryptocurrency space. It also provides valuable education, transparency, and regulatory support, ultimately benefiting individual investors and the overall market.</p> <p>*More accurate Bitcoin price predictions empower traders and investors to make informed decisions, reducing the risk of financial losses and market speculation.</p> <p>*By enabling more informed decision-making, the project can contribute to reduced market manipulation and promote overall stability in the cryptocurrency market.</p>
5.	Business Model (Revenue Model)	Generate revenue through subscription services, one-time prediction sales, API/data licensing, consulting, educational content, advertising/partnerships, freemium models, crowdsourced predictions, data sales, white label solutions, and potentially asset management or token sales, depending on regulatory and market factors.

		<p>*Offer subscription plans for users seeking regular access to Bitcoin price predictions, with different tiers based on features, frequency, and data access.</p> <p>*Allow users to purchase individual Bitcoin price predictions for specific timeframes or specific events.</p>
6.	Scalability of the Solution	<p>Ensure the solution can efficiently handle growing data volumes, adapt to user demand through cloud resources, maintain fast data analysis, offer accessible APIs, and accommodate an increasing user base while prioritizing security and compliance.</p> <p>*Ensure the system can efficiently manage and process large volumes of historical and real-time data, accommodating the increasing demand for data as the user base grows.</p> <p>*Design the solution to be compatible with scalable cloud infrastructure, enabling the allocation of additional computational resources as needed to handle increased workloads.</p> <p>Scalability is crucial in accommodating the growing demand for accurate Bitcoin price predictions and ensuring that the solution remains responsive, reliable, and efficient as it serves an expanding user base and evolving market conditions.</p>