Project Design Phase-I
Proposed Solution

Date	27 October 2023
Team ID	Team-593041
Project Name	Time Series Analysis for Bitcoin PricePrediction 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 besolved)	The problem to be solved is the prediction of Bitcoin's price, which is highly volatile andinfluenced by various factors, using a Time Series Analysis approach with the FbProphetmodel. The goal is to provide accurate and reliable price forecasts for Bitcoin, enabling investors and traders to make informeddecisions in a rapidly changing cryptocurrency market
2.	Idea / Solution description	The proposed solution involves building a predictive model using FbProphet, a time series forecasting tool, to analyze historicalBitcoin price data and forecast its future price trends. This model will consider theinherent volatility and various influencingfactors in the cryptocurrency market to provide forecasts for Bitcoin prices. By leveraging FbProphet, which is well-suited for handling time series data, the solution aims to offer more accurate predictions compared to traditional methods.

3.	Novelty / Uniqueness	The novelty of this solution lies in itsapplication of FbProphet to the cryptocurrency market, specifically Bitcoin price prediction. FbProphet is known for itsability to handle seasonality and holiday effects in time series data, which makes it uniquely suited for modeling the price trends of Bitcoin, a highly volatile asset influenced by a range of external factors.
4.	Social Impact / CustomerSatisfaction	This solution has a significant social impactas it empowers cryptocurrency investors and enthusiasts to make more informed decisions
		about Bitcoin investments. Accurate price predictions can help users maximize their returns and minimize risks in a market known for its high volatility. Customer satisfaction is achieved by providing users with a reliable tool for price forecasting and increasing their confidence in the cryptocurrency market.
5.	Business Model (Revenue Model)	The business model for this solution couldinvolve several revenue streams: **Subscription-based model**: Charging usersa subscription fee to access premium features or more accurate predictions. **Freemium model**: Offering basic predictionsfor free and charging for advanced or real- time forecasting services. **Data licensing**: Selling historical and real- time Bitcoin price data to other businessesand researchers. **Consultation and advisory services**: Providing personalized advice and consultation on Bitcoin investments for afee.

6.	Scalability of the Solution	The solution's scalability can be achieved by optimizing the prediction model and infrastructure to handle increasing data volumes and users. Additionally, the solution can be scaled by expanding its coverage to other cryptocurrencies and financial markets, making it a comprehensive tool for price forecasting in the digital asset space. This scalability can be achieved by investing in robust cloud infrastructure, data management, and user support systems to accommodate growing demand