

Project Design Phase-II Technology Stack (Architecture & Stack)

Date	14 November 2023
Team ID	SI-GuidedProject-609307-1697997262
Project Name	Time Series Analysis For Bitcoin Price Prediction Using Prophet
Maximum Marks	4 Marks

Technical Architecture:

The Deliverable shall include the architectural diagram as below and the information as per the table1 & table 2

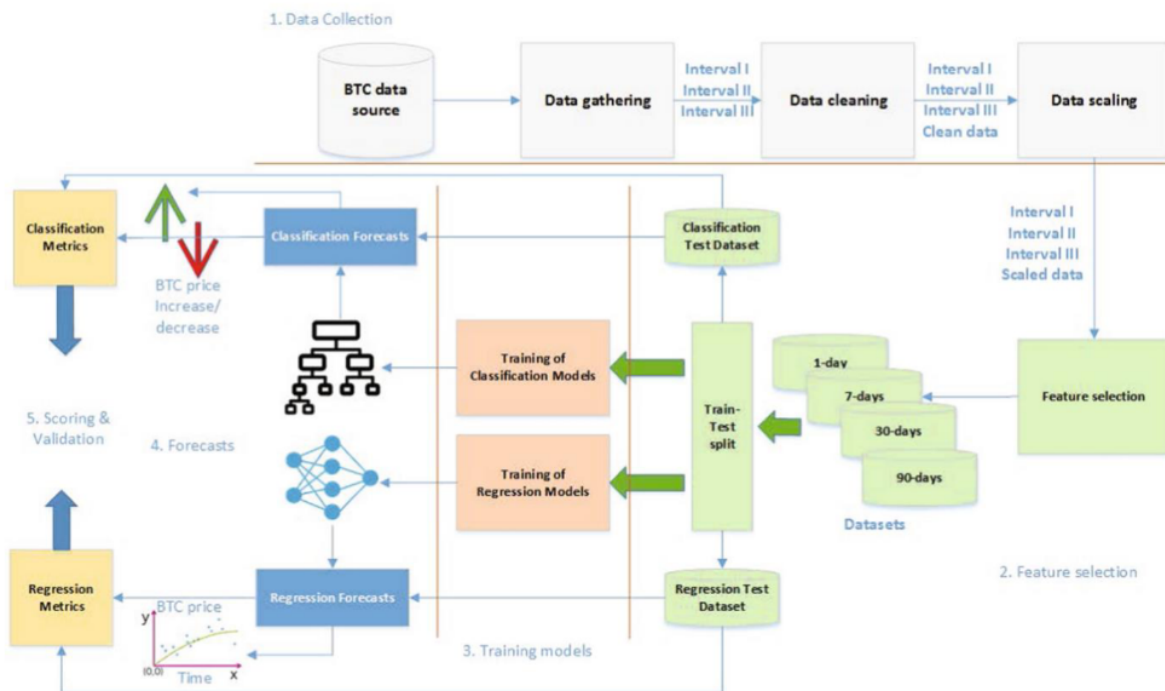


Table-1 Components and Technologies:

S.No	Component	Description	Technology
1	User Interface	How user interacts with application e.g. Web UI	HTML, CSS, prophet
2	Application Logic-1	Building a Python code for the price prediction	Python
3	Database	Data Type, Configurations etc.	From Kaggle (Dataset), SQL
4	File Storage	File storage requirements	SQLite etc.
5	Machine Learning Model	Purpose of Machine Learning Model	Bitcoin Price prediction
6	Infrastructure (Server / Cloud)	Application Deployment on Local System / Cloud	Streamlit, heroku etc.
7	Code File	A Python code for outputting values by using colab or jupyter	Colab, jupyter notebook etc.

Table-2 Application Characteristics:

S.No	Characteristics	Description	Technology
1	Open-Source Frameworks	Utilization of Open Source Frameworks in web	HTML, prophet (pkl), python
2	Security Implementations	Implementations of security measures and access Controls	Encryption etc.
3	Scalable Architecture	Design considerations for the code scalability	Using colab and Load balancing
4	Availability	Measures taken to ensure high availability of the web	Load Balancers etc.
5	Performance	considerations to ensure optimal performance and accuracy	Content Delivery Networks (CDN)