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

Date	23 October 2022
Team ID	PNT2022TMID22641
Project Name	Project – Crude Oil Price Prediction
Maximum Marks	4 Marks

Technical Architecture:

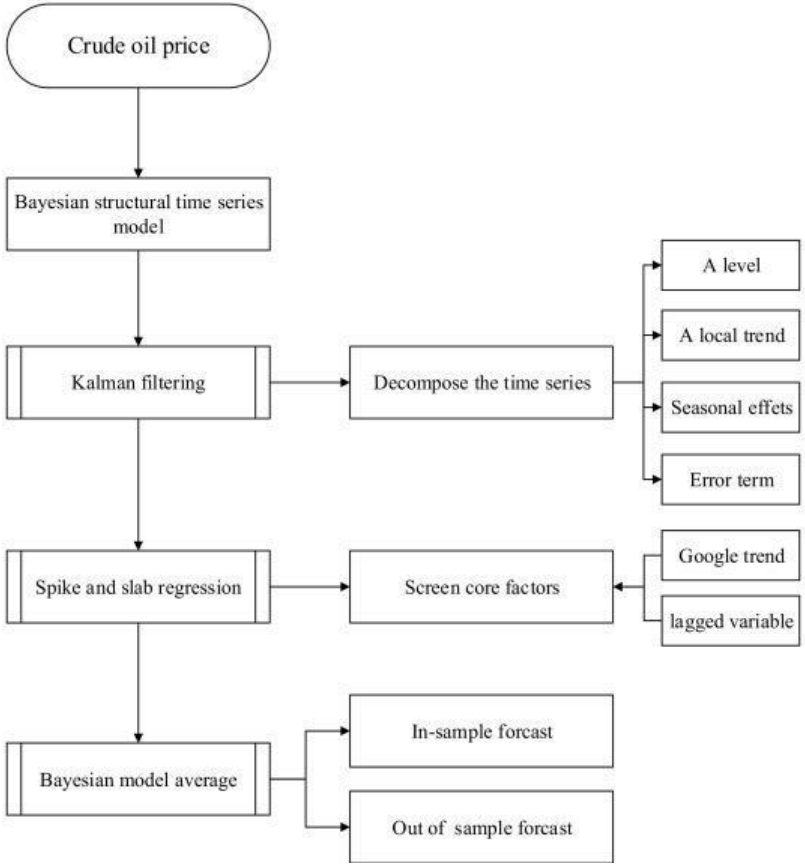

Table-1 : Components & Technologies:

S.No	Component	Description	Technology
1.	User Interface	Web UI and Mobile App	HTML, CSS, JavaScript / Angular Js / React Js etc.
2.	Prediction	For the Prediction of the Price	Python
3.	Web Application	For the web app	Python (Flask)
4.	Database	Email, Phone Number, Age, and Name (String, Integer, Integer, and String	MySQL, NoSQL
5.	Cloud Database	Database Service on Cloud	IBM DB2, IBM Cloudant etc
6.	File Storage	File storage requirements	IBM Block Storage or Other Storage Service or Local Filesystem
7.	Machine Learning Model	Recurrent Neural Networks	Object Recognition Model, etc.
8.	Infrastructure (Server / Cloud)	Application Deployment on Local System / Cloud Local Server Configuration: i5 4th gen, 16 GB of ram Cloud Server Configuration: i3 4th gen, 4 GB ram	Kubernetes

Table-2: Application Characteristics:

S.No	Characteristics	Description	Technology
1.	Open-Source Frameworks	Flask	Web Application
2.	Security Implementations	OAuth Authentication	Authentication is provided by Google or Facebook or any available providers
3.	Scalable Architecture	Microservices	AWS Lambda
4.	Availability	Distributed Servers	CDN
5.	Performance	25,000 Requests Servers	Flask

References:

https://www.sciencedirect.com/science/article/pii/S0140988320300608