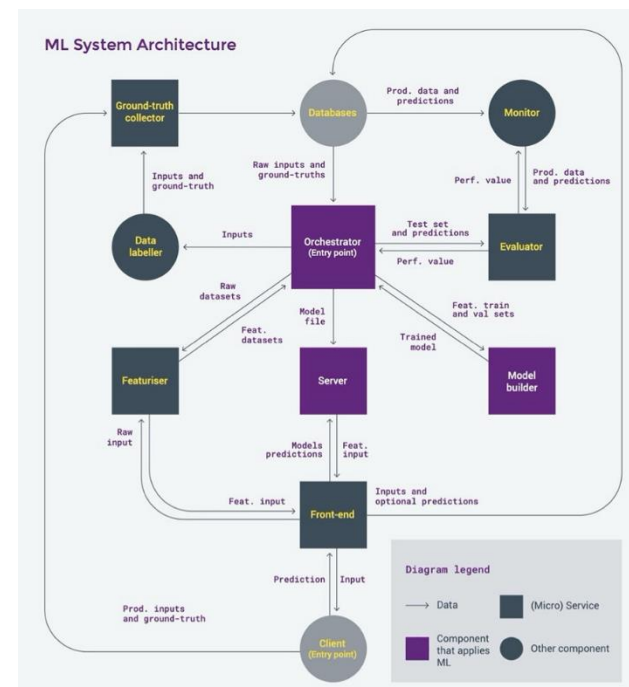
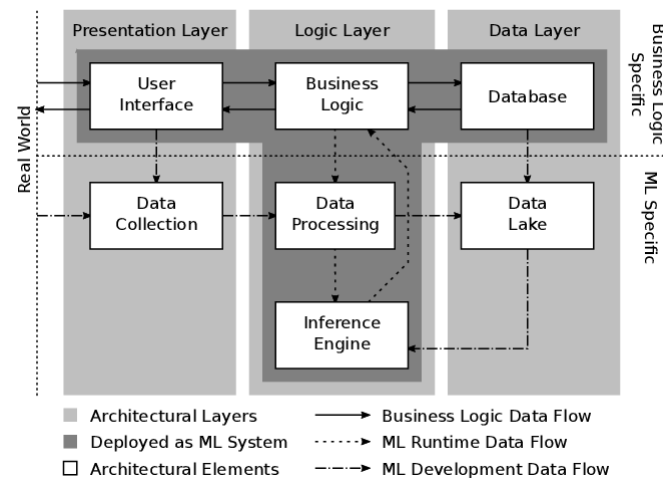


# PROJECT DESIGN PHASE II

## Techonlogy Stack (Architecture and Stack)

|                       |                                      |
|-----------------------|--------------------------------------|
| <b>DATE</b>           | 18 October 2022                      |
| <b>TEAM ID</b>        | PNT2022TMID53394                     |
| <b>PROJECT NAME</b>   | Project – Crude Oil Price Prediction |
| <b>MAXMIMUM MARKS</b> | 4 MARKS                              |

### TECHNICAL ARCHITECTURE:



## TASK I – COMPONENTS AND TECHNOLOGIES:

| S.NO | COMPONENT                       | DESCRIPTION   | TECHNOLOGY   |
|------|---------------------------------|---|--|
| 1.   | User Interface                  | Logic for the Interaction between user and app  | HTML, CSS, JavaScript, React, Python Flask etc.                |
| 2.   | Application Logic-1             | Logic for a process in the application  | Python   |
| 3.   | Application Logic-2             | Logic for a process in the application  | IBM Watson STT service   |
| 4.   | Application Logic-3             | Logic for a process in the application  | IBM Watson Assistant   |
| 5.   | Database                        | Data Type, Configurations etc.  | MySQL  |
| 6.   | Cloud Database                  | Database Service on Cloud   | IBM DB2, IBM Cloudant etc.                                     |
| 7.   | File Storage                    | File storage requirements   | IBM Block Storage or Other Storage Service or Local Filesystem |
| 8.   | External API-1                  | Purpose of External API used in the application   | IBM Weather API, etc.  |
| 9.   | External API-2                  | Purpose of External API used in the application   | Aadhar API, etc.   |
| 10.  | Machine Learning Model          | Purpose of Machine Learning Model   | LSTM, ARIMA, etc.,   |
| 11.  | Infrastructure (Server / Cloud) | Application Deployment on Local System / Cloud<br>Local Server Configuration:<br>Cloud Server Configuration : | Cloud Deployment – IBM Cloud                                   |

## TASK II – APPLICATION CHARACTERISTICS:

| S.NO | COMPONENT                | DESCRIPTION   | TECHNOLOGY                   |
|------|--------------------------|---|------------------------------|
| 1.   | Open-Source Frameworks   | List the open-source frameworks used  | No external APIs             |
| 2.   | Security Implementations | List all the security / access controls implemented, use of firewalls etc.  | User Authentication          |
| 3.   | Scalable Architecture    | Justify the scalability of architecture (3 – tier, Micro-services)  | Three-Tier Architecture      |
| 4.   | Availability             | Justify the availability of application (e.g. use of load balancers, distributed servers etc.)                            | Nil                          |
| 5.   | Performance              | Design consideration for the performance of the application (number of requests per sec, use of Cache, use of CDN's) etc. | Approximately 25 - 250 users |