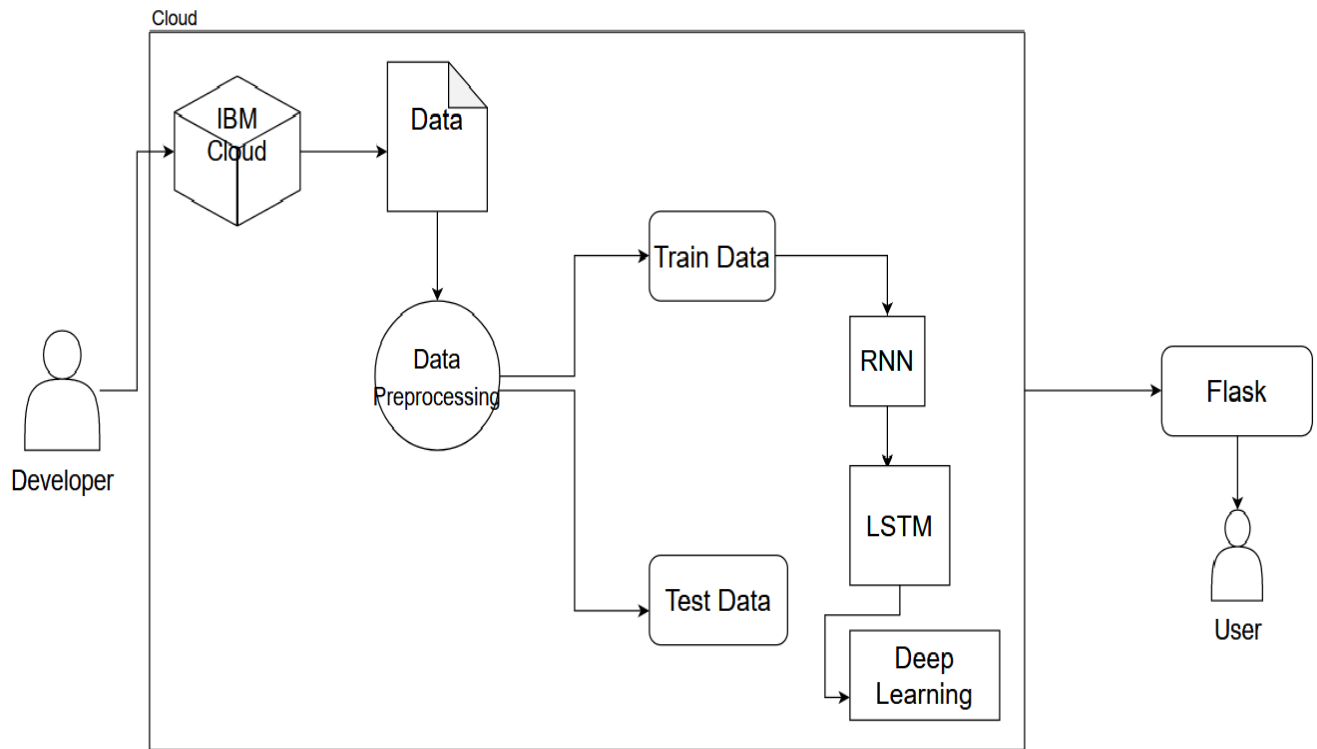


## Project Design Phase-II Technology Stack (Architecture & Stack)

|               |                                      |
|---------------|--------------------------------------|
| Date          | 20 October 2022                      |
| Team ID       | PNT2022TMID09267                     |
| 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                  | How user interacts with application e.g. Web UI, Mobile App, Chatbot etc.                                     | HTML, CSS, JavaScript  |
| 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 Studio  |
| 4.   | Application Logic-3             | Logic for a process in the application  | IBM Watson Machine Learning                                    |
| 5.   | Database                        | Data Type, Configurations etc.  | IBM Cloud Object storage                                       |
| 6.   | Cloud Database                  | Database Service on Cloud   | IBM DB2, IBM Cloudant  |
| 7.   | File Storage                    | File storage requirements   | IBM Block Storage or Other Storage Service or Local Filesystem |
| 8.   | Machine Learning Model          | Purpose of Machine Learning Model   | Sequential Model   |
| 9.   | Infrastructure (Server / Cloud) | Application Deployment on Local System / Cloud<br>Local Server Configuration:<br>Cloud Server Configuration : | Local, Cloud Foundry   |

**Table-2: Application Characteristics:**

| S.No | Characteristics          | Description   | Technology                  |
|------|--------------------------|---|-----------------------------|
| 1.   | Open-Source Frameworks   | List the open-source frameworks used  | Flask                       |
| 2.   | Security Implementations | List all the security / access controls implemented, use of firewalls etc.  | IAM Controls                |
| 3.   | Scalable Architecture    | Justify the scalability of architecture (3 – tier, Micro-services)  | Cloud Foundry, IBM Cloudant |
| 4.   | Availability             | Justify the availability of application (e.g. use of load balancers, distributed servers etc.)                            | Cloud Foundry               |
| 5.   | Performance              | Design consideration for the performance of the application (number of requests per sec, use of Cache, use of CDN's) etc. | Cloud Foundry               |