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

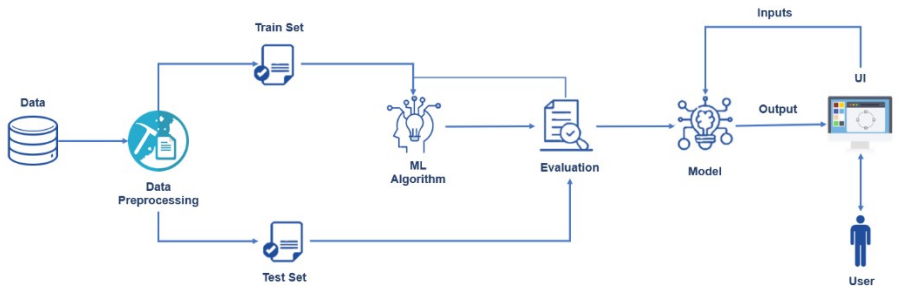
| | |
|---|---|
| Date | 15 October 2022 |
| Team ID | PNT2022TMID40127 |
| Project Name | Project – Car Resale value prediction |
| Maximum Marks | 4 Marks |

**Technical Architecture:**

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

**Example: Order processing during pandemics for offline mode**

**Reference:** https://developer.ibm.com/patterns/ai-powered-backend-system-for-order-processing-during-pandemics/




Guidelines:

1. Include all the processes (As an application logic / Technology Block)
2. Provide infrastructural demarcation (Local / Cloud)
3. Indicate external interfaces (third party API's etc.)
4. Indicate Data Storage components / services
5. Indicate interface to machine learning models (if applicable)

| S.No | Component | Description | |
|---|---|---|---|
| 1. | User Interface | How user interacts<br>Web Ui only | |
| 2. | Application Logic-1 | Load the data set and find the test data and train data | Python |

| | | | |
|---|---|---|---|
| 3. | Application Logic-2 | Logic for a process in the application | Pandas,numpy,sklearn |
| 4. | Application Logic-3 | Logic for a process in the application | flask |
| 5. | Database | Data Type, Configurations etc. | Dataset |
| 6. | Cloud Database | Database Service on Cloud | IBM Cloudant |
| 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 cloud API, etc. |
| 9. | Machine Learning Model | Purpose of Machine Learning Model | Regression Model. |
| 10. | Infrastructure (Server / Cloud) | Application Deployment on Local System / Cloud<br>Local Server Configuration:<br>Cloud Server Configuration : | Local, Cloud Foundry, Kubernetes, etc. |

**Table-2: Application Characteristics:**

| S.No | Characteristics | Description | Technology |
|---|---|---|---|
| 1. | Open-Source Frameworks | List the open-source frameworks used | Technology of Opensource framework |
| 2. | Security Implementations | List all the security / access controls implemented, use of firewalls etc. | e.g. SHA-256, Encryptions, IAM Controls, OWASP etc. |
| 3. | Scalable Architecture | Justify the scalability of architecture (3 – tier, Micro-services) | Machine Learning |
| 4. | Availability | Justify the availability of application (e.g. use of load balancers, distributed servers etc.) | Machine Learning |
| 5. | Performance | Design consideration for the performance of the application (number of requests per sec, use of Cache, use of CDN’s) etc. | Pyhton Flask,html,css |

**References:**

https://c4model.com/

https://developer.ibm.com/patterns/online-order-processing-system-during-pandemic/

https://www.ibm.com/cloud/architecture

https://aws.amazon.com/architecture

https://medium.com/the-internal-startup/how-to-draw-useful-technical-architecture-diagrams-2d20c9fda90d