

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

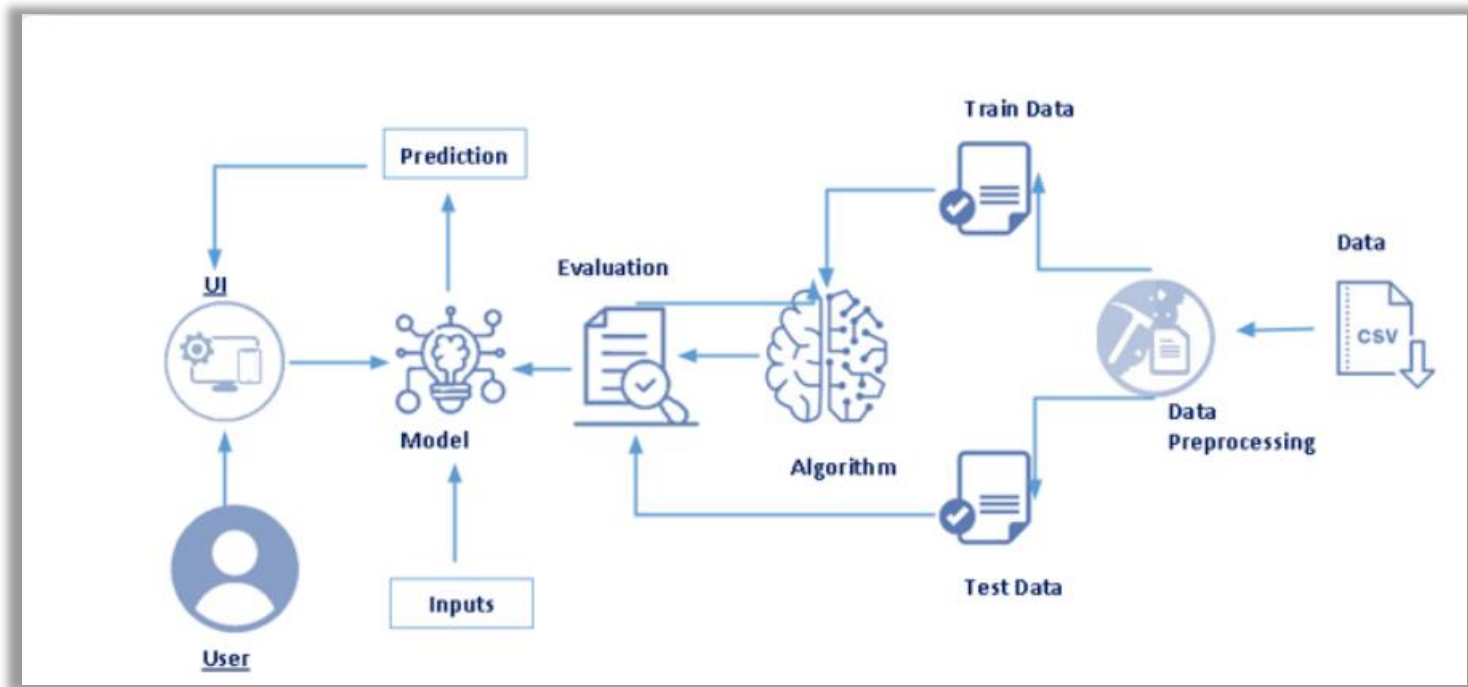
|               |  |
|---------------|--|
| Date          | 27 October 2022  |
| Team ID       | PNT2022TMID21290   |
| Project Name  | Early detection of chronic kidney disease using Machine Learning |
| Maximum Marks | 4 Marks  |

**Technical Architecture:**

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

**Example: Early detection of chronic kidney disease using Machine Learning**

**Reference:** <https://smartinternz.com/guided-project/chronic-kidney-disease-analysis-using-machine-learning>



**Table-1 : Components & Technologies:**

| S.No | Component           | Description                             | Technology                |
|------|---------------------|---|---------------------------|
| 1.   | User Interface      | Web UI                                  | HTML, CSS, Flask          |
| 2.   | Application Logic-1 | Machine learning algorithm is developed | Python (Jupyter Notebook) |
| 3.   | Application Logic-2 | Deploy the ML model                     | IBM Watson                |

|    |                                 |  |                  |
|----|---------------------------------|--|------------------|
| 4. | File Storage                    | The dataset should be stored priorly so that it can be loaded when required      | Local Filesystem |
| 5. | Machine Learning Model          | Machine Learning Model is used to predict if the user has chronic kidney disease | Random Forest    |
| 6. | Infrastructure (Server / Cloud) | Application id deployed on Local System  | Local            |

**Table-2: Application Characteristics:**

| S.No | Characteristics        | Description  | Technology       |
|------|------------------------|--|------------------|
| 1.   | Open-Source Frameworks | Jupyter Notebook, Flask  | Python           |
| 2.   | Scalable Architecture  | It is a 3-tier architecture which enables the scalability                                      | HTML, CSS        |
| 3.   | Availability           | The application is available for use by all as it uses open-source frameworks only             | Jupyter Notebook |
| 4.   | Performance            | The performance of the application is based on the accuracy of the Machine Learning Model used | Jupyter Notebook |

**References:**

<https://smartinternz.com/guided-project/chronic-kidney-disease-analysis-using-machine-learning>