

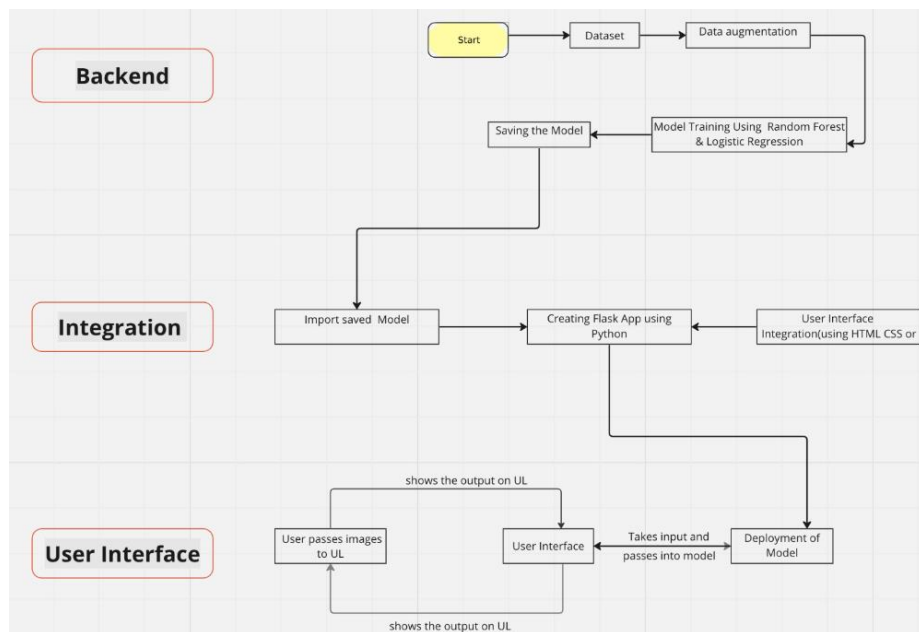
Project Design Phase-II

Technology Stack (Architecture & Stack)

Date	27 October 2023
Team ID	591964
Project Name	Diabetes Prediction 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 & table2



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)

Table-1: Components & Technologies:

S. No	Component	Description	Technology
1.	User Interface	The Web User Interface (WebUI) provides network administrators with a single solution for provisioning, monitoring, and optimizing devices.	HTML, CSS, JavaScript / Angular Js / React Js etc.
2.	Application Logic-1	When the user clicks the submit button the WebUI returns the prediction	Python
3.	Application Logic-2	Logic for a process in the application	IBM Watson Assistant
4.	Database	Data Type, Configurations etc.	MySQL, NoSQL, etc.
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.	External API-1	Purpose of External API used in the application	Nutrition Data API, etc.
8.	External API-2	Purpose of External API used in the application	Medical API, etc.
9.	Machine Learning Model	Purpose of Machine Learning Model	Predicts Output using Random Forest, Logistic regression algorithms.
10.	Infrastructure (Server / Cloud)	Application Deployment on Local System / Cloud Local Server Configuration: Cloud Server Configuration:	Local

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.	Encryptions, IAM Controls ,etc.
3.	Scalable Architecture	Justify the scalability of architecture (3 – tier, Micro-services)	Technology used
4.	Availability	Justify the availability of application (e.g. use of load balancers, distributed servers etc.)	Technology used
5.	Performance	Design consideration for the performance of the application (number of requests per sec, use of Cache, use of CDN's) etc.	Technology used

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>