Project Design Phase-II

Technology Architecture

Technical Architecture:

The Deliverable is shown in the table 1 & table 2

Example: AI-based localization and classification of skin disease with erythema
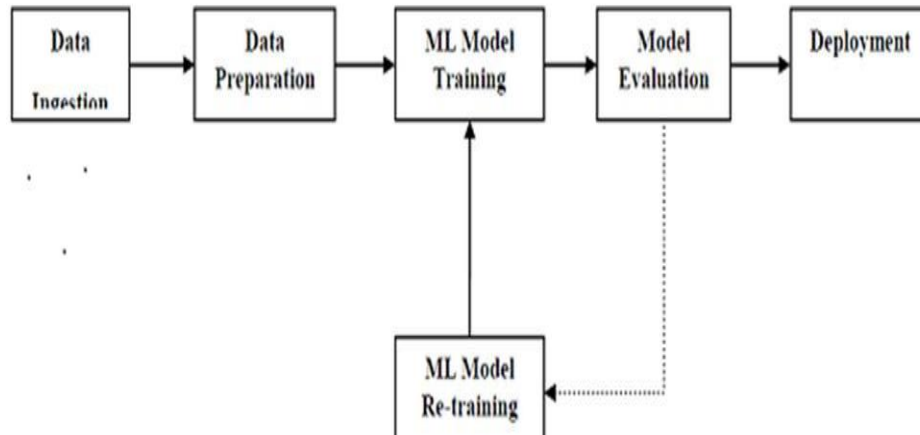
Table-1 : Components & Technologies:

S.No	Component	Description	Technology
1.	User Interface	User interacts with the application using a website	Python Flask
2.	Image Pre-processing	Image of the diseased spot is uploaded through the website and the image is pre-processed using machine learning algorithms.	Python
3.	Disease Prediction	Machine learning model to predict the diseases from the images of the diseases uploaded through the webapp	Python
4.	Mitigation	After predicting the disease, identification and mitigation that particular disease is suggested. Watson Assistant plays a great role in assisting in these processes.	Python, IBM Watson Assistant
6.	Cloud Database	The above-described model is deployed in the IBM cloud.	IBM DB2, IBM Cloudant etc.
7.	File Storage	Files are been stored in cloud.	IBM Block Storage or Other Storage Service or Local Filesystem
9.	Machine Learning Model	Machine learning models are used for image preprocessing, disease prediction and mitigation steps	Image pre-processing model, Disease Prediction model
10.	Infrastructure (Server / Cloud)	Application Deployment on Cloud Cloud Server Configuration : Default	IBM cloud

Table-2: Application Characteristics:

S.No	Characteristics	Description	Technology
1.	Open-Source Frameworks	Tensorflow,keras,seaborn,JupyterNotebook, Google drive, Python Flask.	Technology of Opensource framework
2.	Security Implementations	Some kind of encryption will be done, as this is a web app the owasp will be taken into consideration.	SHA-256, Encryptions, IAM Controls, OWASP etc.
4.	Availability	The website will be deployed in the IBM cloud and will be available for all the users to use irrespective of the organisation or the institution they belong to.	IBM cloud
5.	Performance	As the models and the web applications are deployed in the IBM cloud remote server the website can handle maximum number of requests and can be scaled at ease.	IBM cloud