Project Design Phase – II

Technology Stack (Architecture & Stack)

Date	07 November 2023
Team	Team – 592796
Project Name	Alzheimer Disease Prediction
Maximum Marks	4 Marks

Technical Architecture

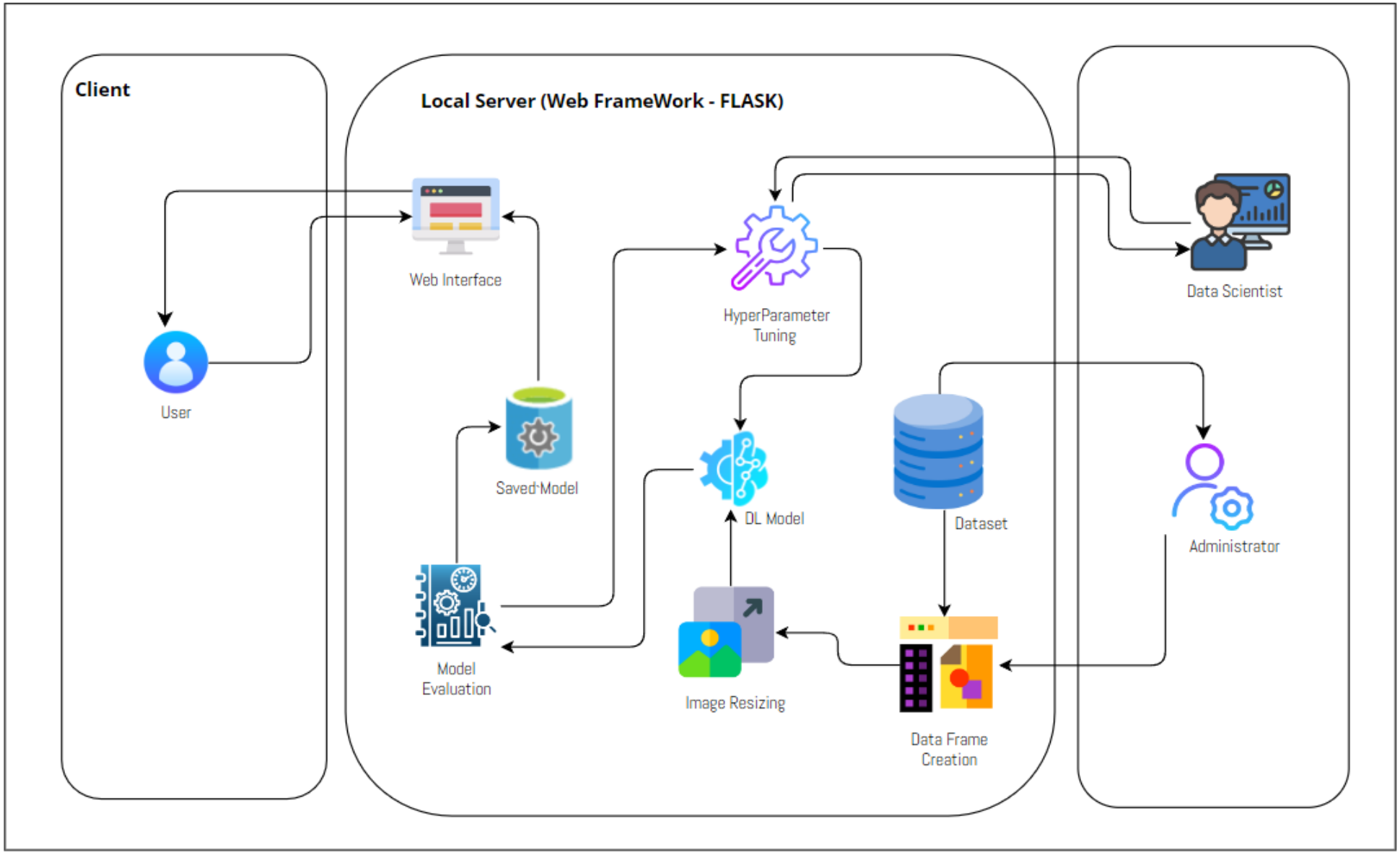

Table-1 : Components & Technologies

S.No.	Component	Description	Technology
1	User Interface	Users can upload input images to the website and use the predict option in the website to predict the current stage of Alzheimer.	HTML, CSS, JavaScript.
2	Application Logic-1	Downloading the dataset, dataframe creation, preprocessing.	Python (pandas, numpy)
3	Application Logic-2	Model building, Model evaluation and Hyperparameter Tuning.	Python (Tensorflow)
4	Database	Image Database. (jpeg)	File Manager
5	File Storage	All files saved locally.	File Manager
6	External API-1	Flask provides an API that simplifies the development of RESTful web services by offering features like Routes and Request Objects. It enables developers to access details about the incoming HTTP request, including the URL, request method, and request data.	Flask
7	Deep Learning Model	The transfer learning model uses deep learning techniques which reads image datasets and trains them based on CNN layers for accurate prediction of result.	Custom Sequential CNN

Table-2 : Application Characteristics

S.No.	Characteristics	Description	Technology
1	Open-Source Frameworks	Flask is a lightweight Python web framework known for its simplicity and ease of use a great choice for building small to medium-sized web applications.	Flask FrameWork
2	Scalable Architecture	3 tier Client-Server Architecture using a local host.	Visual Paradigm
3	Availability	The application will be available on the local environment.	Local Host
4	Performance	Used by a single user at a time.	Command Line