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

Date	12 May 2023
Team ID	NM2023TMID00211
Project Name	Project - Cognitive Care: Early Intervention of Alzheimer's disease

Technical Architecture:

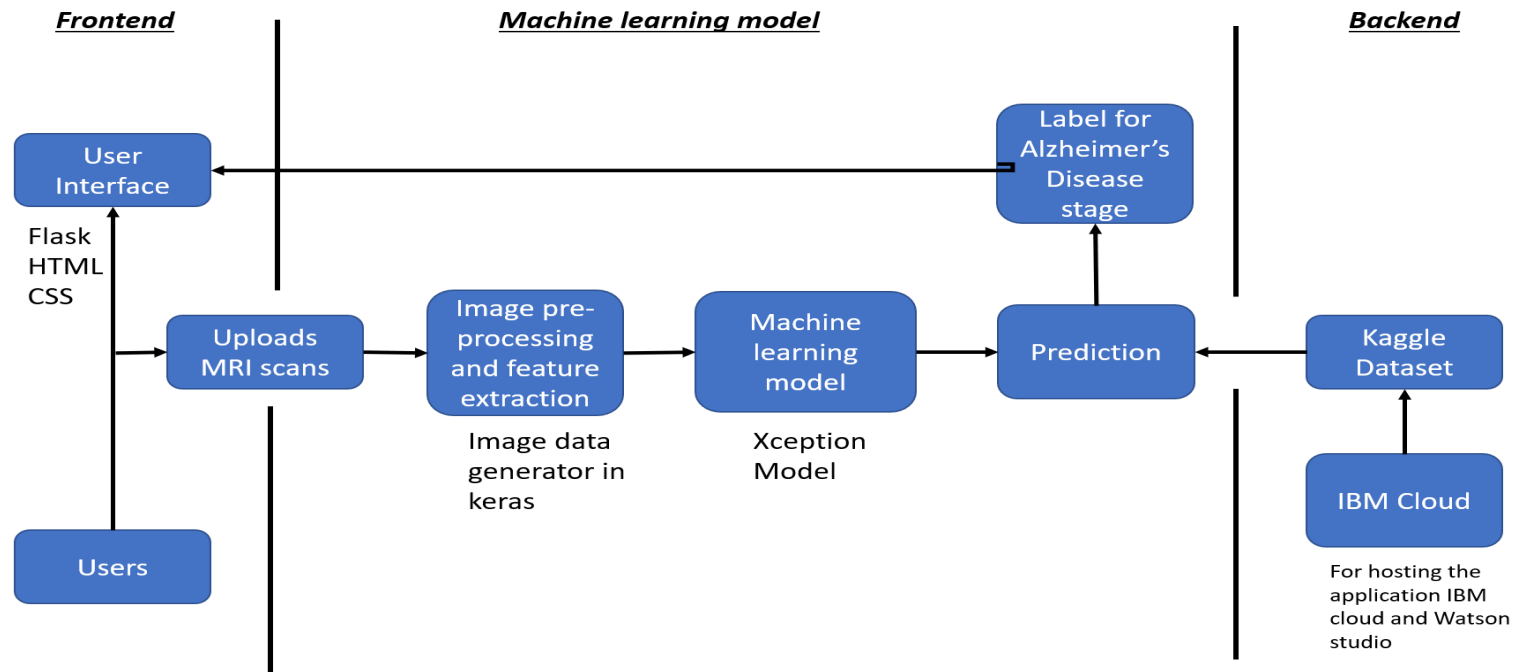**Table-1 : Components & Technologies:**

S.No	Component	Description	Technology
1.	User Interface	How user interacts with application through a Web UI which has detailed information about the alzheimer's disease. And the final output is also delivered in the same page after prediction.	Flask, HTML, CSS.
2.	Application Logic-1	The user has a option to upload his/her scan images.	Flask, HTML, CSS.
3.	Application Logic-2	The uploaded image is pre-processed and feature extraction is done and the processed data is sent to the machine learning model.	Image data generator in keras.
4.	Machine Learning Model	The machine learning model uses certain algorithm for prediction.	Xception Model.
5.	External API-1	For dataset and training the model.	Kaggle.
6.	Infrastructure (Server / Cloud)	Application Deployment on Cloud.	Watson Studio, IBM cloud.

Table-2: Application Characteristics:

S.No	Characteristics	Description	Technology
1.	Open-Source Frameworks	For the development and deployment of application	Watson studio, IBM cloud
2.	Scalable Architecture	Further, Suggestion regarding nearby hospitals for treatment can be listed in the page.	APIs
3.	Availability	The application is available all the time.	IBM cloud
4.	Performance	The application will perform fast and can handle multiple users without crashing and can recover easily	IBM cloud