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

Date	19 September 2022
Team ID	PNT2022TMID593039
Project Name	Project – ASL Alphabet Image Recognition
Maximum Marks	4 Marks
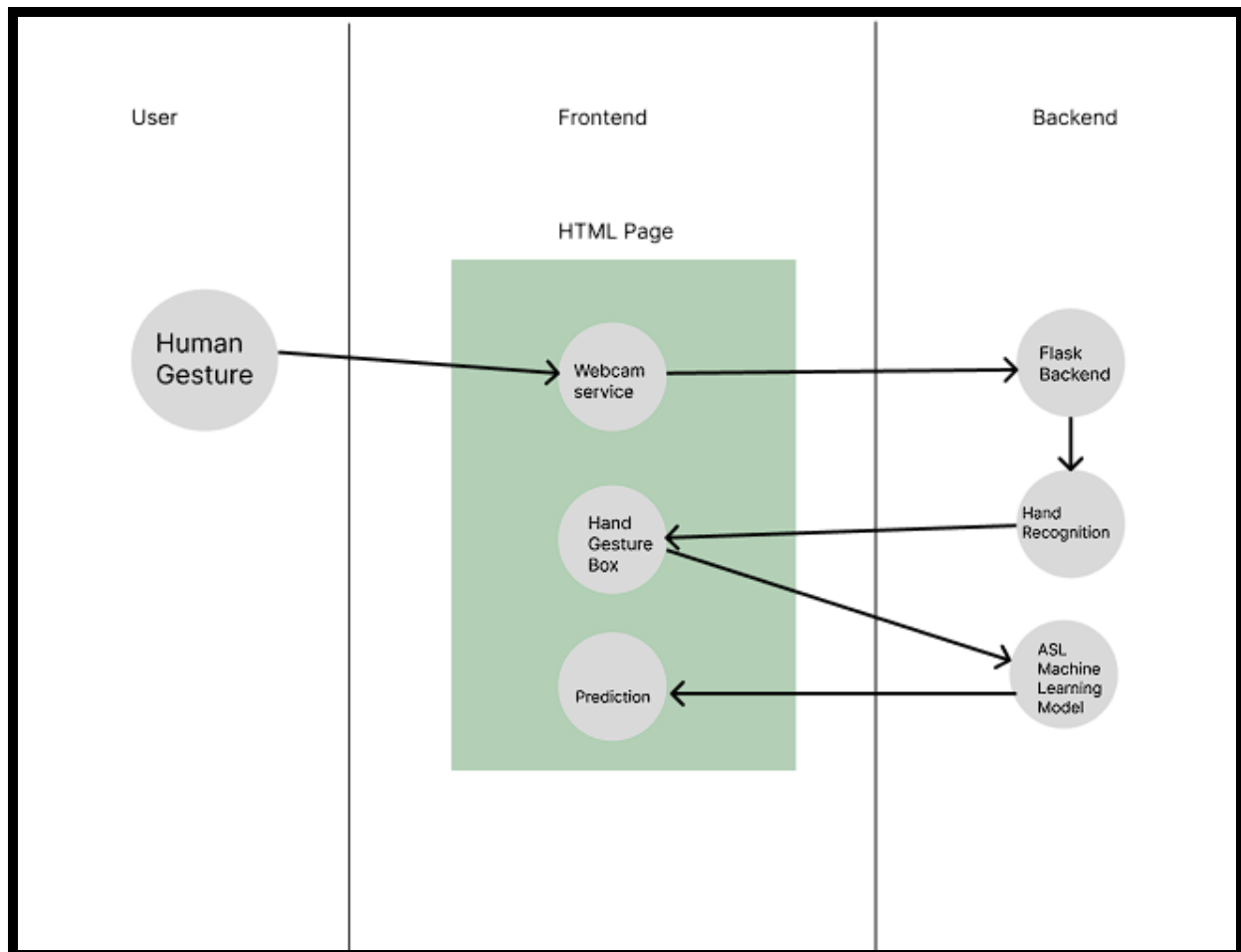
Table-1 : Components & Technologies:

S. No	Component	Description	Technology
1.	User Interface	How user interacts with application e.g. Web UI, Mobile App, Chatbot etc.	HTML, CSS
2.	Application Logic-1	Identifying Hands in the video capture frame	Mediapipe
3.	Application Logic-2	Drawing a Bounding box over the hands and using it as the image	Mediapipe,OpenCV
4.	Machine Learning Model	Identifying the correct ASL gesture from image	Tensorflow, Keras, Skimage, numpy,Pandas
5.	Backend	Backend for the application	Flask
6.	Infrastructure (Server / Cloud)	Application Deployment on Local System / Cloud Local Server Configuration: To be hosted on vercel	Local, Cloud Foundry,

Table-2: Application Characteristics:

S. No	Characteristics	Description	Technology
1.	Open-Source Frameworks	Flask,HTML,CSS	Frontend and Backend servers
2.	Scalable Architecture	Frontend-backend architecture	HTML,Flask
3.	Availability	Using distributed servers	Apache
4.	Performance	Minimizing the number of requests and loading the model directly into the backend	