

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

Date	23 November 2023
Team ID	592033
Project Name	ASL - Alphabet Image Recognition
Maximum Marks	4 Marks

Technical Architecture:

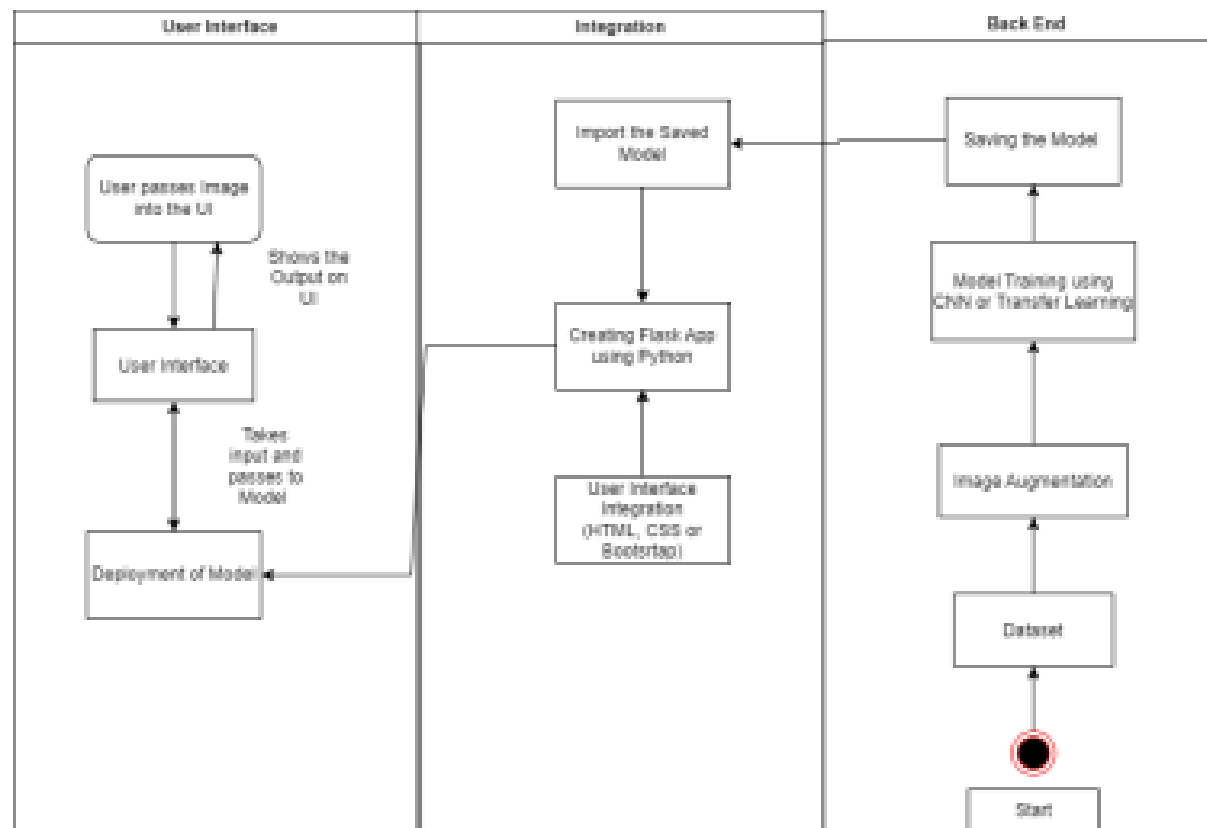


Table-1 : Components & Technologies:

S.No	Component	Description	Technology
1.	User Interface	How the user interacts with the application.	HTML, CSS, JavaScript etc.
2.	Application Logic-1	Logic for a process in the application	Python
3.	Database	Collect the Dataset Based on the Problem Statement	File Manager(Downloaded and unzipped from Kaggle)
4.	File Storage/ Data	File storage requirements for Storing the dataset	Local System, Google Drive Etc.
5.	Frame Work	Used to Create a web Application, Integrating Frontend and Back End	Python Flask, Django etc.
6.	Deep Learning Model	Purpose of Model	CNN, Transfer Learning etc.
7.	Infrastructure (Server / Cloud)	Application Deployment on Local System / Cloud Local Server Configuration: Cloud Server Configuration :	Local, Cloud Foundry, Kubernetes, etc.

Table-2: Application Characteristics:

S.No	Characteristics	Description	Technology
1.	Open-Source Frameworks	Use of open-source frameworks for flexibility and community support	Python Flask or Django for backend
2.	Security Implementations	Implementation of security measures to protect user data and application integrity	HTTPS, JWT for authentication
3.	Scalable Architecture	Design the application to handle increased load and data volume	Cloud deployment with Kubernetes for scalability
4.	Availability	Ensuring the application is accessible and available to users	Load balancing, redundant servers, cloud services
5.	Performance	Optimizing the application for fast and responsive user experience	Caching mechanisms, efficient algorithms

References:

<https://c4model.com/>

<https://www.leanix.net/en/wiki/ea/technical-architecture>

<https://aws.amazon.com/architecture>

<https://medium.com/the-internal-startup/how-to-draw-useful-technical-architecture-diagrams-2d20c9fda90d>