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

Date	13 October 2022
Team ID	PNT2022TMID22166
Project Name	Real time Communication Powered by AI for specially abled
Maximum Marks	4 Marks

Technical Architecture:

Computer systems are designed using Technical Architecture (TA), a type of IT architecture. It entails creating a technological blueprint for the positioning, communication, and interdependence of all components in order to satisfy system-relevant requirements.
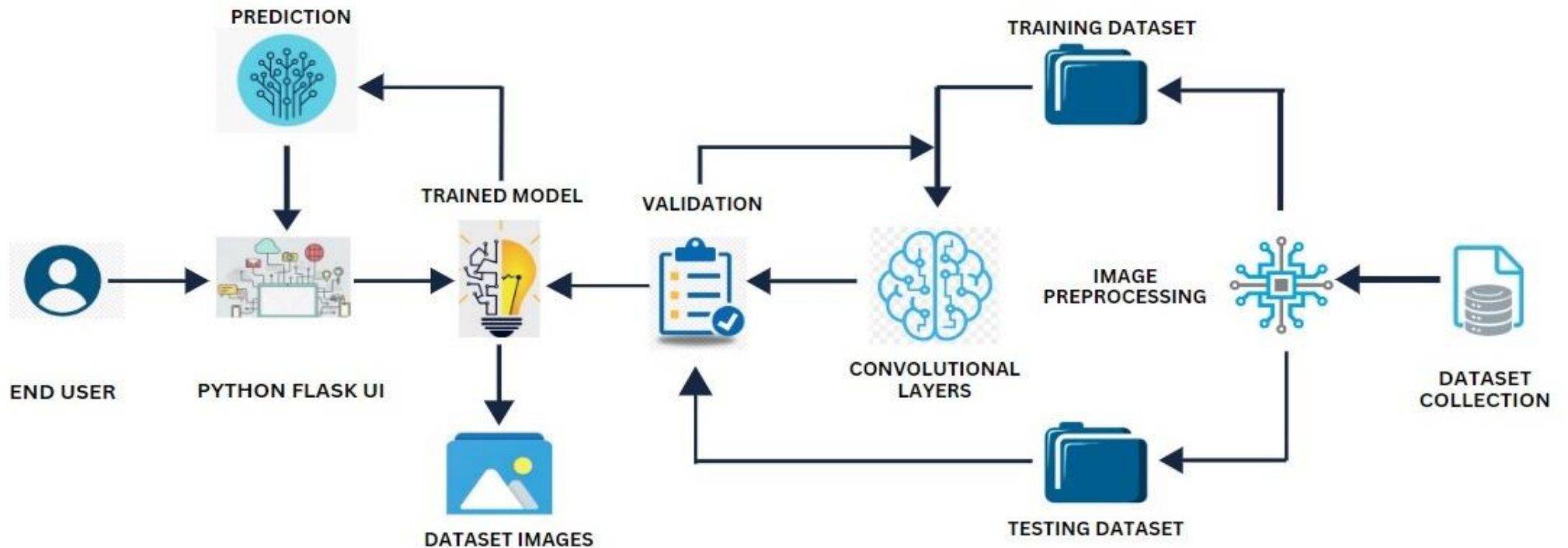
Components & Technologies:

S.No	Component	Description	Technology
1.	User Interface	Chat bot user interface	HTML, CSS, JavaScript, Python .
2.	Application Logic	Logic for a process in the application	Java / Python
3.	Application Logic	Logic for a process in the application	IBM Watson STT service Watson TTS service
4.	Application Logic	Logic for a process in the application	IBM Watson Assistant
5.	Cloud Database	Database Service on Cloud	IBM Cloudant
6.	File Storage	File storage requirements	Local File system
7.	Machine Learning Model	Neural Networks –CNN model, ANN model	Object Recognition Model –CNN model
8.	Infrastructure (Server / Cloud)	Application Deployment on Local System	Local, Cloud Foundry, Kubernetes.

Application Characteristics:

S.No	Characteristics	Description	Technology
1.	Open-Source Frameworks	Numpy, Pandas , Keras, Tensorflow, NLTK, Sonnet.	Python framework
2.	Security Implementations	Security access controls ,Use of firewalls	SHA-256
3.	Scalable Architecture	Scalable AI	SEI Digital library
4.	Availability	Use of Cloud and database Virtual assistant	IBM Cloud IBM Watson Assistant
5.	Performance	Image pre-processing and CNN	Python