

Technology Stack (Architecture &Stack)

Date	03 October 2022
Team ID	PNT2022TMID34007
Project Name	Real-Time Communication System Powered by AI for Specially Abled

Components and Technologies:

SI.NO	Component	Description	Technology
1	User interface	user interacts with local host 5000	HTML,Bootstrap
2	CNN	It is used for build a the neural network layer	keras
3	Automated image-captioning	Backend support to the keras	Tensor Flow
4	Image Preprocessing	It is used for image processing and computer vision(sign detection)	Open Cv
5	Application Building	It is used for developing web application	Flask

6	Cloud database	It is used to store and retrieve data set	IBM DB2
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Application Characteristics:

SI.NO	Characteristics	Description	Technology
1	Open-Source Framework	It provides libraries to build light weight application	Flask
2	Security Implementation	Numpy and Pandas is used for data analysis and visualization	Python(libraries)
3	Scalable Architecture	Generators provide the that provide isolate the internal code dependencies	Python (generators)
4	Availability	Runs everywhere and user friendly	Anaconda (Idle)
5	Performance	It has incredible perform boost	Python(function)

Technology Stack

User interface

Application

Database

HTML

User page

Browser



Python

Image processing

Open cv



Build web application

Build neural network layer



keras



Flask

Voice/text

Output



Backend support to keras

Tensor flow



Collection of data



Dataset

shutterstock.com - 1316686355

IBM cloud

Train CNN model

IBM

Studio

