

Technology Stack (Architecture &Stack)

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| Date | 03 October 2022 |
| Team ID | PNT2022TMID33994 |
| 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 |

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|---|----------------|---|---------|
| 6 | Cloud database | It is used to store and retrieve data set | IBM DB2 |
|---|----------------|---|---------|

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 - 1316886355

IBM cloud

Train CNN model

IBM

Studio

