

Project Design Phase-I Solution Architecture

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| Date | 16-11-2022 |
| Team ID | PNT2022TMID43692 |
| Project Name | Real-Time Communication System Powered by AI for Specially Abled |
| Maximum Marks | 4 Marks |

Solution Architecture

Solution architecture is a complex process with many sub-processes that will be a bridge between problems and technology solutions.

- Technology used are Python, Jupyter, Numpy, OpenCv, Keras, Tensorflow, GTTS.
- Methodology -First we should collect the keypoints of hand gestures, face recognition, finger action.
- The next step to build the LSTM model and train in our database. It will be useful to recognize the hand gestures and face recognition.
- The number of epochs for the model is determined by us, if we increase the number of epochs the accuracy increases but time taken to run the model also increases and overfitting of model can happen, for gesture recognition
- we can use this model for real time hand gesture detection and simultaneously convert the gesture to speech or text using OpenCV

