Project Design Phase-II

Functional Requirement Template

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Team ID	PNT2022TMID30001
Project Name	Real -Time Communication System Powered By AI For Specially Abled

Functional Requirements:

• **System** is presented as black box.

• **Hearing impaired** is the person that performs the signs.

• **Normal hearing** is the passive user of the system.

   A. The **System requirements** that are required are specified below,

Camera module:

- In this module the input video streaming can be captured by using camera. The capture video frames can be converted as image by extracting the image from video.

- Image pre-processing and segmentation module:

- In image pre-processing module, the input extracted images can be sub-segmented so that multiple regions can be formed from a single image.

Database module:

- The model of trained images can be stored in data base management system for detection of objects in indoor and outdoor environments.

Recognition module:

- The conventional neural network algorithm is used for recognition of objects in indoor and outdoor environments by comparing with data base system.

Audio module:

- The recognized object images format can be converted as audio format based on speech synthesizer and the audio output is easy for understanding blind and selfnavigate without any persons help.

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