## Project Design Phase-II Solution Requirements (Functional & Non-functional)

| Date          | 03 October 2022  |
|---------------|--|
| Team ID       | PNT2022TMID52497   |
| Project Name  | Real-Time Communication System Powered By Al For Specially abled |
| Maximum Marks | 4 Marks  |

## **Functional Requirements:**

Following are the functional requirements of the proposed solution.

| FR No. | Functional Requirement (Epic) | Sub Requirement (Story / Sub-Task)   |
|--------|-------------------------------|--|
| FR-1   | User registration             | 1.Registration through email     2.Registration through mobile no  |
|        | User confirmation             | 1.Confirmation via email     2.Confirmation via otp  |
| FR-2   | Data collection               | 1.Collecting data for building our project. 2.Creating two folders one for training and the other for testing. 3.Images present in the training folder will be used for building the model and the testing images will be used for validating our model. |
| FR-3   | Model building                | 1.Initializing the model 2.Adding convolution layers 3.adding pooling layers 4.Full connection layers which includes hidden layers 5.Flatten layer 6.Compile the model with layers we added to complete the nerural network structure                    |
| FR-4   | Test the model                | Test the model by passing an image to get predictions.  Make sure that the dimensions,rescaling,target size are correct while testing the model  |
| FR-5   | Train the model               | You can also train your Image classification Models on IBM Cloud  1.Train the model 2.Store the Model 3.Download the Stored model to the Localsystem   |

| FR-6 | Train image classification model | 1.Train the model on IBM 2.Store the Model 3.Download the model to local system 4.Test the model locally |
|------|----------------------------------|--|

## Non-functional Requirements:

Following are the non-functional requirements of the proposed solution.  $\label{eq:following} % \[ \frac{1}{2} \left( \frac{1}{2} \right) + \frac{$ 

| FR No. | Non-Functional Requirement | Description  |
|--------|----------------------------|--|
| NFR-1  | Usability                  | Non-functional requirements are the constrains of<br>the software. The requirements deal with issues like<br>scalability, maintainability, performance, portability,<br>security, reliability and a lot.   |
| NFR-2  | Security                   | It provides cyber security systems with up-to-date and relevant knowledge of Industry specific and global threats, which help teams make critical decisions.   |
| NFR-3  | Reliability                | AI technology can empower people living with limited physical mobility.  Microsoft's AI for Accessibility program uses the potential of Artificial Intelligence to develop solutions to many physical and cognitive challenges disabled individuals face at work and in daily life to promote social inclusion for them. |
| NFR-4  | Performance                | AI enables people with disabilities to step into a world where their difficulties are understood and taken into account. Technology adapts and helps transform the worldinto an inclusive place with artificial intelligence accessibility.  |

| NFR-5 | Availability | Using driverless cars enables disabled people to leave the house, get around their communities, interact with people and even find jobs.                                 |
|-------|--------------|--|
|       |              | Once autonomous vehicles are fully integrated into society, they could ease independent mobility, and increase accessibility adapted to each user's abilities and needs. |
| NFR-6 | Scalability  | Scalability is a non-functional property of a system that describes the ability to appropriately handle increasing workloads   |