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

Date	03October 2022
Team ID	PNT2022TMID48097
Project Name	Project - Real-Time Communication System Powered By AI 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	Data collection	Collecting data for building our project. Creating two folders one for training and the other for testing. 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-2	Model building	1.Initializing the model 2. Adding Convolution layers 3. Adding Pooling layers 4. Flatten layer 5. Full connection layers which include hidden layers compile the model with layers we added to complete the neural network structure
FR-3	Test the model	Test the model by passing an image to get predictions. While test the model we should make sure that the test image should meet the target size of the model, dimensions need to meet, and should undergo rescaling before giving it to the model.
FR-4	Application Building	Building a Flask application that is used for building our UI which in backend can be interfaced to the model to get predictions. Flask application requires an HTML page for Frontend and a Python file for the backend which takes care of the interface with the model.
FR-5	Train CNN Model	You can also train your Image classification Models on IBM Cloud using Watson Studio Service. • Train model • Store y Model • Download the Stored model to the Local system

FR-6	**Registration**	• Register for IBM cloud
FR-7	Train image classification model	• Train the model on IBM • Store your Model • Download model to local system • Test model locally

Non-functional Requirements:

Following are the non-functional requirements of the proposed solution.

FR No.	Non-Functional Requirement	Description
NFR-1	**Usability**	Non-functional requirements are the constrains or the requirements imposed on the system. They specify the quality attribute of the software. Non-functional requirements deal with issues like scalability, maintainability, Performance, portability, security, reliability, and many more.
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 about priorities based on what attack strategies may be used against a company.
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 world into 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.