Project Planning Phase
Project Milestone & Activity List

Team ID	PNT2022TMID31975
Project Name	Project: Real Time Communication System Powered by AI for Specially Abled

Milestone List:

Milestone Name	Duration	Submission Dates
Project Planning Phase	1 Week	06th November, 2022
Project Development Phase	3 Weeks	06th November, 2022
Pre-requisites	1 Week	06th November, 2022
Project Structure	1 Week	06th November, 2022
Data Collection	2 Days	06th November, 2022
Image Pre-processing	4 Days	06th November, 2022
Model Building	1 Week	
Test the model	2 Days	
Application Building	1 Week	
Train CNN Model on IBM	2 Days	

Activity List:

Prepare Milestone & Activity List	Prepare the milestone and the activity list of the project which schedules the activity.	6th November,2022
Sprint Delivery Plan	Describes about the Product Backlog, Sprint Planning, Stories, Story points using Agile Software Methodologies such as Scrum, JIRA etc,.	6th November,2022
Delivery of Sprint – 1	Completed Data Collection, Data Preprocessing and Augmentation, and Split data into Train, Validation and Test sets	6th November, 2022
Delivery of Sprint – 2		
Delivery of Sprint – 3		
Delivery of Sprint – 4		

Pre-requisites	Download all the necessary software required to solve the problem at hand	6th November, 2022
Project Structure	Organize the project into proper files and folders for easy deployment and debugging	6th November, 2022
Data Collection	Collect relevant data that is required to solve the given problem	6th November, 2022
Create Train and Test Folders	Split the data into Train and Test data. Train data will be used to train our model and the trained model will be tested on the Test data	6th November, 2022
Image Pre-processing	Data images are subjected to augmentation like rotation, flip, zoom etc	6th November, 2022
Import Image Data Generator Library.	Generate batches of augmented images in a random fashion	8th November, 2022
Apply Image Data Generator functionality.	The train dataset is split into Train and Validation set which is used to train and validate the model respectively at each epoch	8th November, 2022
Import the required model building libraries	Downloading and adding the necessary Python libraries to the project	
Initialize the model	Define the type of model	
Add the convolution layer	Initialize and add a Convolutional layer to the model with appropriate parameters like filters, kernel_size etc	
Add the pooling layer	Initialize and add a Pooling layer, either Max or Min or Avg pooling, to the model with appropriate parameters like kernel_size etc	
Add the flatten layer	Add the flatten layer to convert the outputs into 1 Dimension	
Adding the dense layers	Adding the Fully Connected Layer for the final predictions	
Compile the model	Compile the model along with all these layers and specify the metrics, loss function and optimizer	
Fit and save the model.	Load the Train data onto the model to train it and save it after training	

Test the model	Use the Test data to evaluate the model for metrics like Precision, Recall, Accuracy and F-Measure	
Import the packages and load thesaved model.	After saving the model use the necessary library/package to load the saved model and to reuse it	
Load the test image, pre-process it and predict.	Load the test data, preprocess it and feed it to the model for predictions	
Application Building	Build a Web application to deploy the model	
Build a flask application.	Use the Flask framework as a server and to host the webpages	
Build the HTML page.	Build a login page and Dashboard as the UI	
Register for IBM Cloud.	Go to IBM cloud and register	
Train CNN Model on IBM	Train the saved model on IBM Cloud	