Project Planning Phase
Project Milestone & Activity List

Date	08 November 2022
Team ID	PNT2022TMID01231
Project Name	Project: Real – Time Communication System Powered by AI for Specially – Abled
Maximum Marks	4 Marks

Milestone List:

Milestone Number	Milestone Name	Duration	Submission Dates
MN – 01	Ideation Phase	3 Weeks	17 September, 2022
MN – 02	Project Design Phase – I	2 Weeks	01 October, 2022
MN – 03	Project Design Phase – II	2 Weeks	15 October, 2022
MN – 04	Project Planning Phase	1 Week	22 October, 2022
MN – 05	Project Development Phase	3 Weeks	18 November, 2022
MN – 06	Pre-requisites	1 Week	30 September, 2022
MN – 07	Project Structure	1 Week	02 October, 2022
MN – 08	Data Collection	2 Days	04 October, 2022
MN – 09	Image Pre-processing	4 Days	08 October, 2022
MN – 10	Model Building	1 Week	19 October, 2022
MN – 11	Test the model	2 Days	20 October, 2022
MN – 12	Application Building	1 Week	22 October, 2022
MN – 13	Train CNN Model on IBM	2 Days	30 October, 2022

Activity List:

Milestone Number	Activity Number	Activity Name	Description	Submission Dates
MN – 01	AN – 01	Literature survey	Literature survey on the selected project & Information Gathering	17 September, 2022
	AN – 02	Empathy Map	Empathize & Discover about the user.	10 September, 2022
	AN – 03	Brain – Storming	Ideation, Brainstorming & Idea Prioritization for the project.	17 September, 2022
	AN – 04	Problem Statements	Define the Problem Statement to understand your customer's point of view about the problem.	10 September, 2022
MN – 02	AN – 05	Proposed Solution	Describes the Problem Statement (Problem to be solved), Idea/ Solution description, Novelty/ Uniqueness, Social Impact/	24 September, 2022

			Customer Satisfaction, Business Model (Revenue Model) and Scalability of the Solution of the project.	
	AN – 06	Problem Solution Fit	Prepare Problem Solution Fit document.	01 October, 2022
	AN – 07	Solution Architecture	Bridge the gap between business problems and technology solutions.	01 October, 2022
MN – 03	AN – 08	Customer Journey Map	Prepare the customer journey maps to understand the user interactions & experiences with the application (entry to exit).	08 October, 2022
	AN – 09	Solution Requirements	Describe the Functional & Non-functional Requirement for the Proposed Solution.	15 October, 2022
	AN – 10	Data Flow Diagram	A visual representation of the information flows within a system, and provide information about right amount of the system requirement. Show how data enters and leaves the system and where data is stored.	15 October, 2022
	AN – 11	Technology Stack	Describe Architectural Diagram, it's Components, Technologies used and Application Characteristics.	15 October, 2022
MN – 04	AN – 12	Prepare Milestone & Activity List	Prepare the milestones & activity list of the project	22 October, 2022
	AN – 13	Sprint Delivery Plan	Describe about the Product Backlog, Sprint Planning, Stories, Story points using Agile Software Development Methodologies such as Scrum, JIRA etc.	22 October, 2022
MN – 05	AN – 14	Delivery of Sprint – 1	Creating a standard Webpage.	29 October, 2022
	AN – 15	Delivery of Sprint – 2	Creating a user-friendly website.	05 November, 2022
	AN – 16	Delivery of Sprint – 3	Mobile and Desktop accessibility.	12 November, 2022
	AN – 17	Delivery of Sprint – 4	Adding new features.	18 November, 2022
MN – 06	AN – 18	Pre-requisites	Install the required software, it's supporting packages and create a project development environment.	30 September, 2022
MN – 07	AN – 19	Project Structure	Create the Project Structure for building Conversation Engine.	02 October, 2022
MN – 08	AN – 20	Data Collection	Collect data for building the project.	04 October, 2022
	AN – 21	Create Train and Test Folders	Create Train and Test folders with each folder having folders with images of different hand signs	06 October, 2022
MN – 09	AN – 22	Image Pre-processing	We will pre-process the images which will be used for building the model.	08 October, 2022
	AN – 23	Import Image Data Generator Library.	Generate batches of tensor image data with real-time data augmentation.	10 October, 2022
	AN – 24	Apply Image Data Generator functionality.	Splitting the dataset for training and testing purpose in an appropriate ratio.	12 October, 2022
MN – 10	AN – 25	Import the required model building libraries	Add packages containing the appropriate functions and other entities for constructing the model.	14 October, 2022

	AN – 26	Initialize the model	To initialize the model parameters and choosing an optimization algorithm.	14 October, 2022
	AN – 27	Add the convolution layer	Apply convolution operation by mentioning kernel size and stride.	15 October, 2022
	AN – 28	Add the pooling layer	Perform the appropriate Average pooling and/or Max pooling layers and stride.	15 October, 2022
	AN – 29	Add the flatten layer	Convert the multidimensional data to single dimensional data.	16 October, 2022
	AN – 30	Adding the dense layers	Append single dimensional fully connected layers.	17 October, 2022
	AN – 31	Compile the model	To define the loss function, optimizers, and metrics for prediction.	18 October, 2022
	AN – 32	Fit and save the model.	Learn good values for all the weights and the bias from labelled examples.	19 October, 2022
MN – 11	AN – 33	Test the model	We test the model by passing an image to get predictions.	20 October, 2022
	AN – 34	Import the packages and load the saved model.	Loading the user defined model to work for testing purpose.	21 October, 2022
	AN – 35	Load the test image, pre-process it and predict.	Pre-processing an input image and passing it into the model to witness the predictions for the same.	21 October, 2022
MN – 12	AN – 36	Application Building	We will be building a Flask application that is used for building our UI which in backend can be interfaced to the model to get predictions.	22 October, 2022
	AN – 37	Build a flask application.	• Load the required packages. • Initialize graph, load the model, initialize the flask app and load the video. Graph element is required to work with TensorFlow. • Configure the home page.	24 October, 2022
	AN – 38	Build the HTML page.	Build an HTML page to display the processed video on the screen, so that the person can show signs which can be detected.	26 October, 2022
MN – 13	AN – 39	Register for IBM Cloud.	We need to register for IBM Cloud to access the service.	28 October, 2022
	AN – 40	Train CNN Model on IBM	• Train your model on IBM Cloud. • Store your Model on IBM Cloud. • Download the Stored model to the Local system.	30 October, 2022