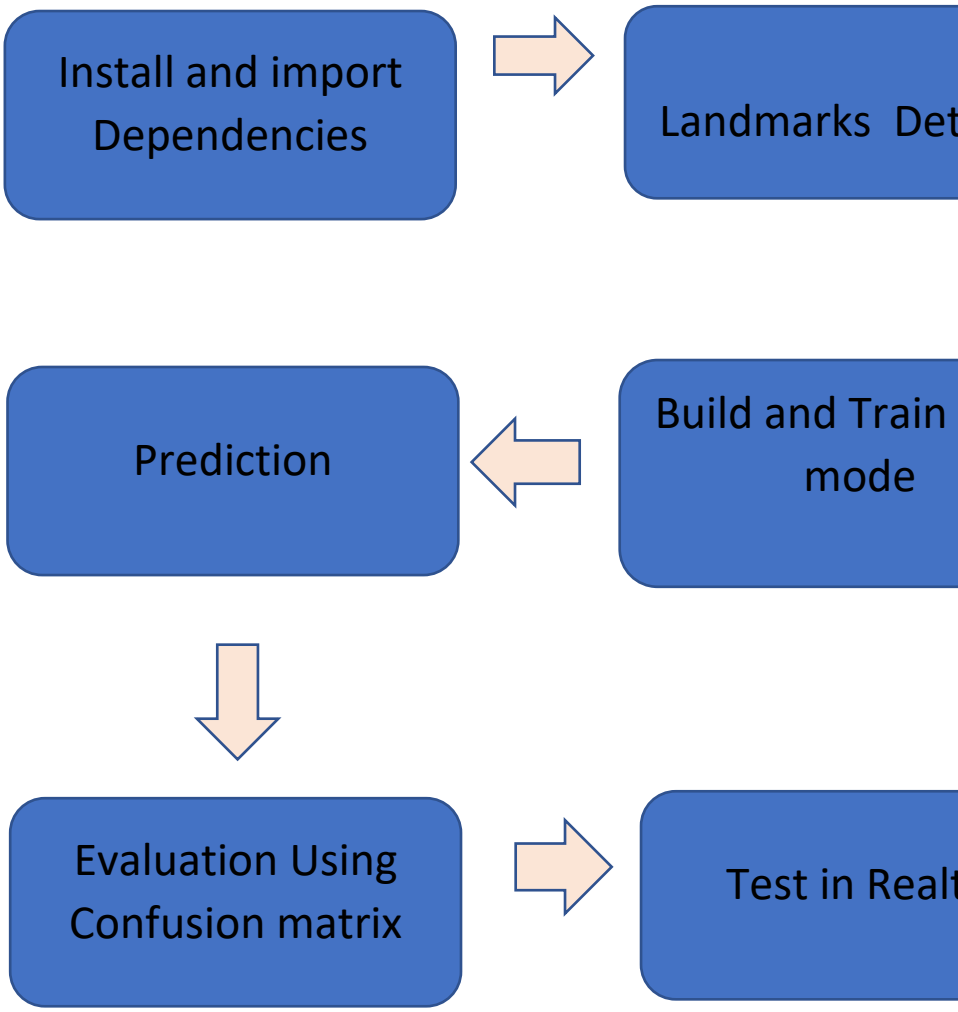
Date	13 October2022
Team ID	PNT2022TMID45340
Project Name	Real-Time Communication System Powered by AI for Specially Abled
Maximum Marks	4 Marks

Data Flow Diagrams:



Flow:

- We start by collecting key points from media-pipe holistic and collect a bunch of data from key-points
- Save data in the form of numpy arrays.
- We then build a LSTM model and train with our stored data
- The number of epochs for the model is determined by us, if we increase the number of epochs the accuracy increases but time taken to run the model also increases and overfitting of model can happen, for gesture recognition.
- Once training is done, we can use this model for real time hand gesture detection and simultaneously convert the gesture to speech using OpenCV.

User Stories

User Type	Functional Requirement (Epic)	User Story Number	User Story / Task	Acceptance criteria	Priority	Release
Developer	Data Collection	USN-1	Collect Dataset		High	Sprint-1
		USN-2	Collecting Key points using Media Pipe Holisitic		High	Sprint-1
	Model Building	USN-3	Model Initialisation with required layers		High	Sprint-2
		USN-4	Training model using LSTM from		Medium	Sprint-2

			key points collected			
	Testing	USN-5	Testing the model's performance		High	Sprint-3
		USN-6	Convert text to Speech using google API		Medium	Sprint-4
Customer (Web user)	Communication	USN-1	Communicating in Front of camera	Communication isn't enabled if the person isn't communicating in front of the camera	High	Sprint-1

		USN-2	Speech and text are delivered by web interface	The sign language is converted into text and speech	High	Sprint - 4