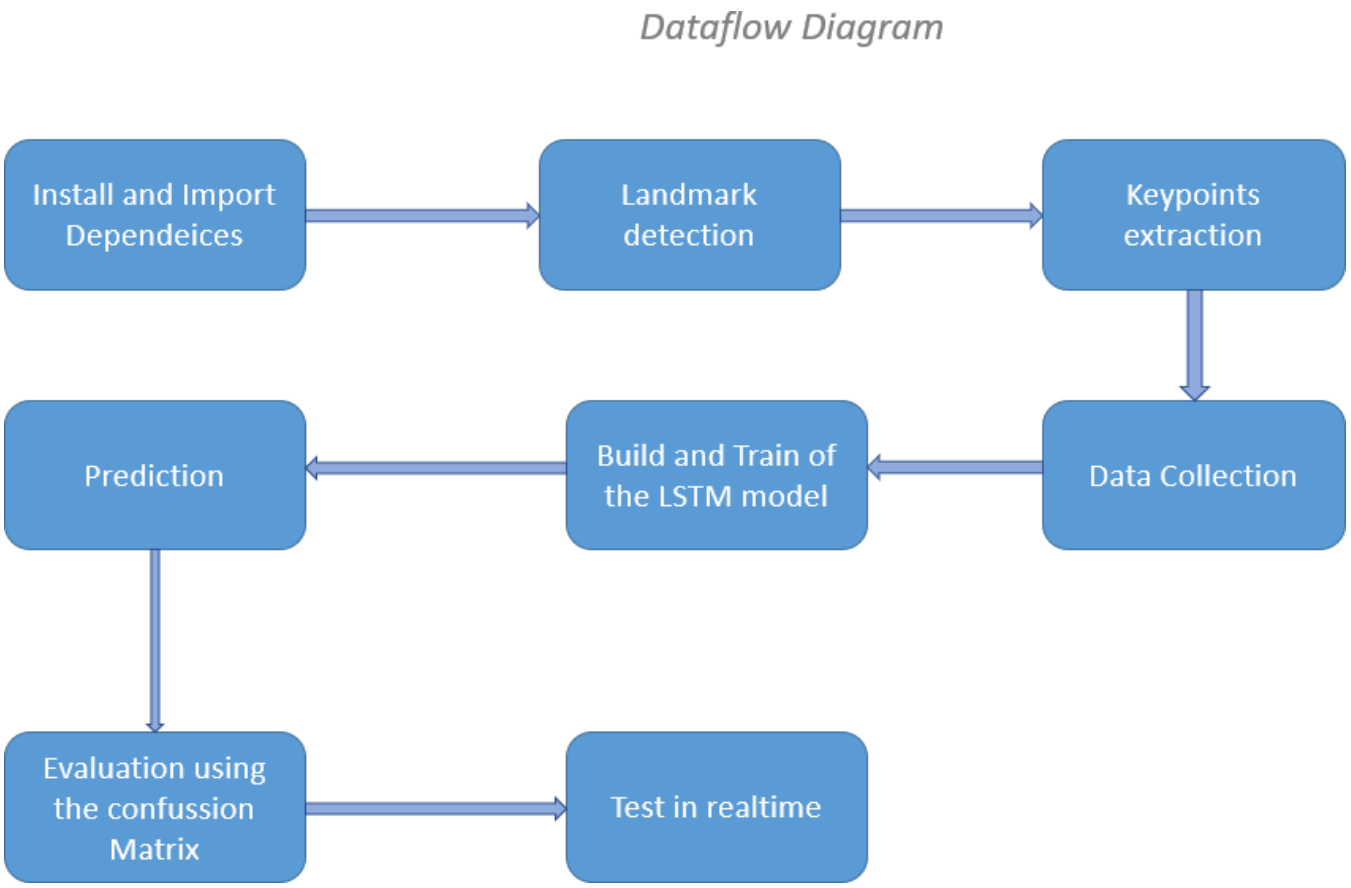
Project Design Phase-II
Data Flow Diagram & User Stories

Date	03 October 2022
Team ID	PNT2022TMID48284
Project Name	Real-Time Communication System Powered by AI for Specially Abled
Maximum Marks	4 Marks

Data Flow Diagram:



Flow:

- We have started by collecting keypoints from media-pipe holistic and collected a bunch of data from key points
- Now, we have saved the data in the form of nummpy arrays.
- We then build 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 the model may happen, for gesture recognition.
- Once the Training is done we can use this model for real time hand gesture detection and simultaneously convert the gesture into the 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	Collection of dataset		High	Sprint-1
		USN-2	Collect key points using media pipe and the holistic		High	Sprint-1
	Model Building	USN-3	Model intialization with required layers		High	Sprint-2
		USN-4	Training model using LSTM Keypoints collected		Medium	Sprint-1
	Testing	USN-5	Testing the model performance		High	Sprint-1
		USN-6	Convert speech into text using Google API		Medium	Sprint-4

User Type	Functional Requirement (Epic)	User Story Number	User Story / Task	Acceptance criteria	Priority	Release
Customer (Web user)	Communication	USN-1	Communication in Front of the camera.	Communication is not enabled if, the person is not communicating infront 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