Title - *'Enhancing Sign Language Recognition with Action Detection and Keypoint Sequences'* or *'Building a Sign Language Model with LSTM-Powered Action Detection'*

Data Pre-processing

Data Collection - The dataset for our project is being collected from Google ASL Dataset. The dataset consists of 186 gigabyte **Parque**t files.

Parquet files are a little bit complicated to work with. But you can find particular methods in pandas and tensorflow.Parquet files are a little bit complicated to work with. But you can find particular methods in pandas and tensorflow.

We have a large dataset of over three million fingerspelled characters produced by over 100 Deaf signers captured via the selfie camera of a smartphone with a variety of backgrounds and lighting conditions.

Data Visualization - Data visualisation is done through mediapipe APIs.

Link 1   Link 2

We have visualised the data set and found top 20 frequent phrases in the dataset and vice versa.

We have found out the relation assigned between character and value.

Training with the basic model, validation, and completion of the data pipeline

Transformer model - A transformer model is a neural network that learns context and thus meaning by tracking relationships in sequential data like the words in this sentence.

Transformer models apply an evolving set of mathematical techniques, called attention or self-attention, to detect subtle ways even distant data elements in a series influence and depend on each other.

Identification of the exact tasks you want to complete for the final submission

☐ To implement OpenCV.

☐ To improve model accuracy.

GitHub repo - Repo

Group Member Responsibilities

Jaickey - Data Load, Data Visualization, EDA , Data Preprocessing

Sanjib - Model Training, Data Split (Train/Test), Plotting training and validation loss.

Worked on the encode and decode layer.