

Group 36

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American Sign Language Interpreter

Problem Statement:

We are training a dataset of American Sign Language (<https://www.kaggle.com/datasets/ayuraj/asl-dataset>), a system of communication using visual gestures and signs that usually as used by deaf people in America, to develop a sign language interpreter which translates a sign language to English or vice versa.

Dataset Description:

The data set is a collection of images of alphabets and numbers from the American Sign Language, separated in 36 folders which represent the various classes. The training data set contains around 2,500 images. There are 36 classes, of which 26 are for the letters A-Z and 10 classes for numbers 0-9.

Goals:

To obtain an understanding of sign language users' basic expressions and be able to respond even without knowing sign language.

Project Timeline:

We plan to complete the following tasks regarding the project within the following timeline to most efficiently meet all deadlines:

Week 3 – Clean and split data; find background literature

Week 4 – Begin exploratory data analysis; develop basic outline for project report

Week 5 – Create prediction models

Week 6 – Test models' performance

Week 7 – Develop front-end

Week 8 – Prepare presentation; finish project report

Week 9 – Presentation