

SPM ASSIGNMENT-1

Harshith-S

U4CSE17305

Step 0: Select project

Isolated Sign Language Recognition:

Sign language is the movement language that the hearing and speech impaired community uses for expression of their thoughts and emotions through a series of hand and arm motions, facial expressions and head/body postures.

Real-time sign language translation systems that convert continuous sign sequences to text/speech.

Isolated Sign language recognition (ISLR) - recognition of dynamic gestures corresponding to words. So currently we would like to focus on ISLR.

Step-1: Identify project objectives

1.1. objectives and measures of effectiveness

- effectiveness is measured by word error rate (WER)
- objective is to classify the video sequences to words with minimum WER

1.2 Project Authority

- Dr. Geetha.M
- Neetha J

1.3 Stakeholder

- the team
- mentor (observers)
- external evaluator

1.4 Communication

virtual meetings via teams

1.5 frequent meeting with team & guide were held and status is reported to external evaluation

Step 2 Identify project infrastructure

Standards to follow

- Good code quality
- model that covers all the cases
- model with best WER
- Good Code Quality

Step-3 : Analyse Project Characteristics

3.1 Objective driven

3.2 We are using deep learning to achieve the goal

3.3 We are using media pipe hand recognition api to extract features from videos and give the output to a sequential model to identify words

3.4 methodology - Agile

Step - 4 Identify project product & activities

video - file

↓
split into frames

↓
media pipe to extract features

↓
sequential model

↓
gives words as output

Step 5 effort estimation

A team of 4 will be doing the project in a timespan of 8 months

Step 6 Identify activity risk

(1) RISK of overfitting the training dataset

Step 7 Allocate resources

7.1 Analysis of existing team - whole team

7.2 Writing code for LSTM - Harshitha, Sasanik

7.3 Connectionist temporal Classifier - Prabath & Harshitha

7.4 Convolutional neural networks - Sasanik

7.5 Publish the work - whole team

Step 8 Review Publish Plan

- Get approval regarding the project plan from the Guide

Step 9 & 10: Execute plan & lower level planning