

Winnovation: An End to End approach for Classifying sequence based American sign language actions using videos

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Abstract - This article describes a novel end to end video classification approach which we proposed for detecting actions based on American sign languages. The central idea for this project is to provide assistance to dumb people which will make it easier for them to communicate. Furthermore, we are planning to integrate this with an app which maps the action to the corresponding speech transcripts.

1 Introduction

Action recognition is one of the challenging fields in Computer vision because it involves multiple things like motion analysis, motion tracking etc. For American Sign Language(ASL) where the variety of signs is very huge then the condition gets even more complicated. Most of the words in ASL requires the analysis of multiple frames to get recognized, hence it seems to be an active area of research.

1.1 Prior Works

There are lot of studies going on simultaneously for classification and detection of ASL. Most of the studies revolves around classifying Letters and others were using actions which only requires single frame prediction. Even some proposed the classification on videos as well but not able to deploy it. Hence we are proposing a lightweight ASL recognition approach which can be successfully deployed within an Android/ios app and will be Available to everyone.

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