FINAL YEAR PROJECT

Controlling Computer using Hand Gestures

GROUP MEMBERS (**Group 22**)

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PROJECT GUIDE

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Outline

- Problem Statement
- Objectives
- Work done in last semester
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- Work done till date
- Next completion plan

Problem Statement

- Hand gesture Recognition is of great importance for human computer interaction(HCI) because of its extensive applications in virtual reality and sign language recognition.
- The aim of this project is to develop an interface to enable users to control other their computers by using hand gestures and a webcam.
- Hence our problem statement becomes, *Controlling Computer using Hand Gestures.*

Objectives

- To build and train a model for feature extraction and classification of hand gestures with good accuracy.
- To use a trained model for classification of hand gestures and recognizing a action and perform an operation accordingly.
- To control a computer and perform related activities using hand gestures.

Work Done in Last Semester

- Researched for the problem statement and how this project will be effective for users.
- Researched some previous research papers regarding the same to find something new to perform.
- As per research and work done, published the review paper named '**A Survey Paper on Controlling Computer using Hand Gesture**' in IRJET.
- Review paper link: https://www.irjet.net/archives/V9/i2/IRJET-V9I2181.pdf

Outcomes in Last Semester

- We have understood the problem statement, how does people use hand gestures for HCI.
- As per our research we have got to know that there are different methods to implement the project and IOT devices (like Arduino, sensors, etc.) which are being used to implement hand gestures recognition system.
- According to our research we decided to use the cost effective method that is using the webcam of laptop.

Work Done till date

- By choosing a standard dataset from Kaggle, we have trained the model with Convolutional Neural Network(CNN).
- Also we have decided to use different available automation python libraries to implement problem statement.

Next Completion Plan

- Improving the accuracy of the model and trying to overcome the overfitting problem.
- Going to testify the model for recognition of correct hand gestures.
- The tasks for the particular hand gestures will be allocated to perform the operations and build the interface.

“Thank You”