

ABSTRACT

For Non-Technical People:

- Our project is a web-based game that lets users play rock-paper-scissors against the computer.
- Users can use their hand gestures, detected through a webcam, to play the game.
- The game has three difficulty levels for users to choose from.
- We also have an image recognition feature that lets users upload images and get a list of recognized objects.
- Our platform is user-friendly and has a login/signup feature to save user progress and access personalized settings.

For Technical People:

- Our project is a computer vision-based web application that uses OpenCV, MediaPipe, and cvzone libraries for hand gesture detection and YOLOv3 and cvlib for object recognition.
- We have used several image processing techniques, such as skin detection and thresholding, to accurately detect hand gestures.

- We have implemented a pre-trained YOLOv3 object detection model and cvlib library to recognize multiple objects in uploaded images.
- The website's back-end is built with Django, to store user-uploaded images.
- The website has user authentication and authorization functionalities to save user progress and access personalized settings.