

PP MINI PROJECT

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Topic- Gesture Recognition App

About the Project-

This is a Computer Vision project which recognizes hand gestures and executes specific functions based on those hand gestures (Example, controlling the volume of the device or opening certain apps).

Working-

- The app contains three modes- Volume Control, App Opener, Rock Paper Scissors Control.
- These modes can be toggled through the buttons in the GUI.
- The volume control mode controls the volume of the device based on the hand gesture of the user. The gestures being of 'zooming-in' (volume is decreased) and 'zooming-out' (volume is increased).
- The app opener mode opens Microsoft apps on invoking unique gestures like 'fist', 'three', 'rock', 'thumbs up' and 'ok'.
- The RPS control mode imitates the working of the rock papers scissors game, on invoking either of these gestures, a certain browser app opens and another closes simultaneously. For example, if 'rock' gesture opens app A, and then we make the 'paper' gesture, it closes app A (paper defeats rock) and opens another app B.

Screenshots of the GUI-

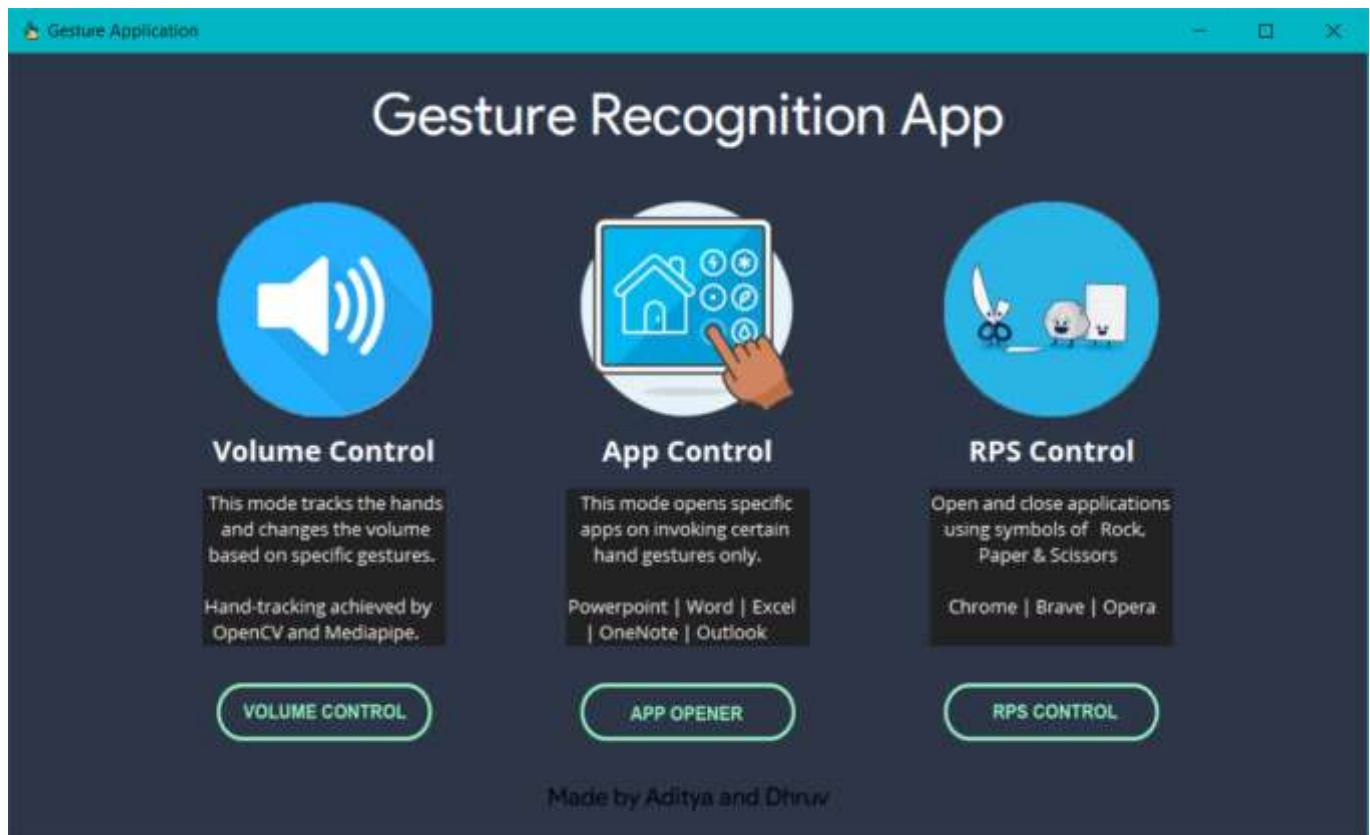


Figure 1- Main Display

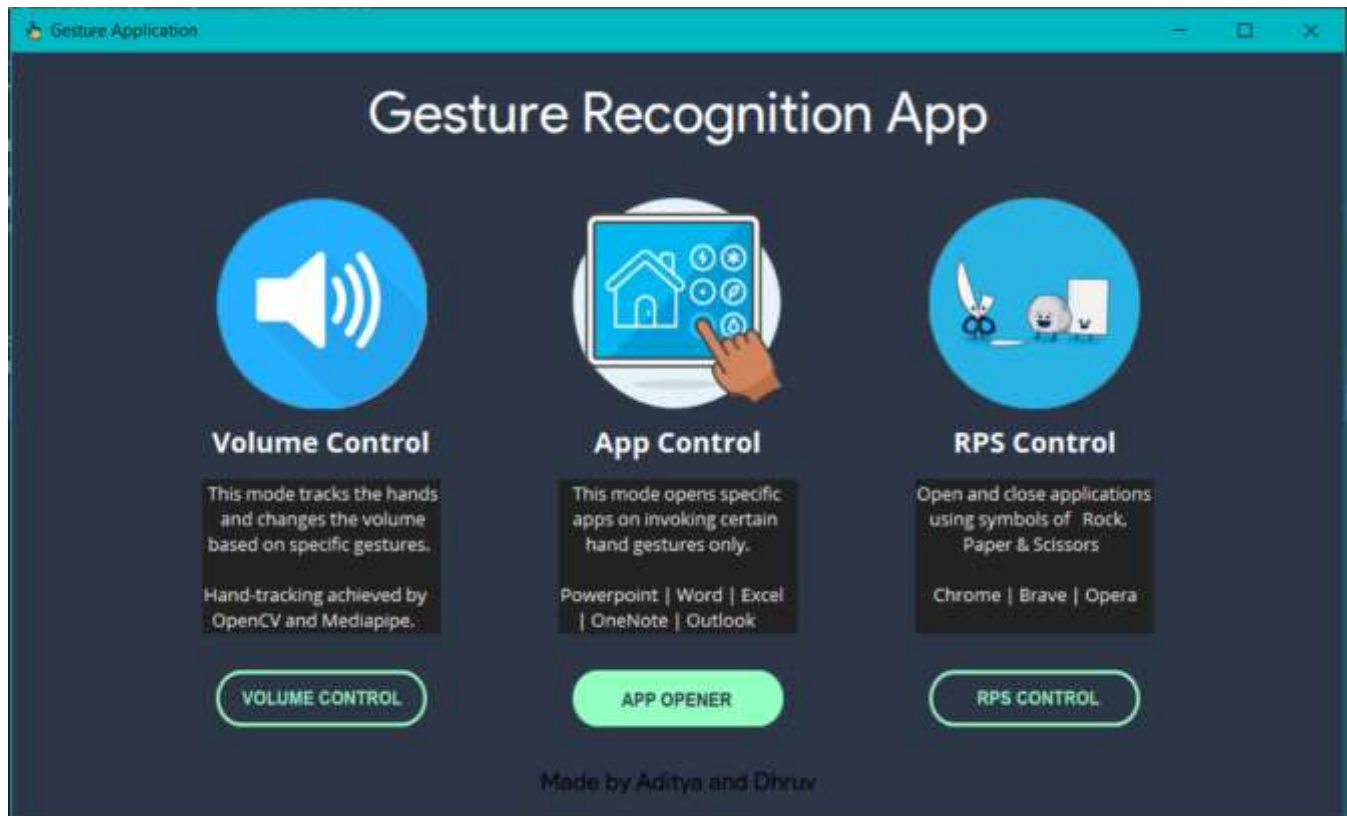


Figure 2- Toggling the Modes (app opener hovered)



Figure 3- New Window (Hand detected)

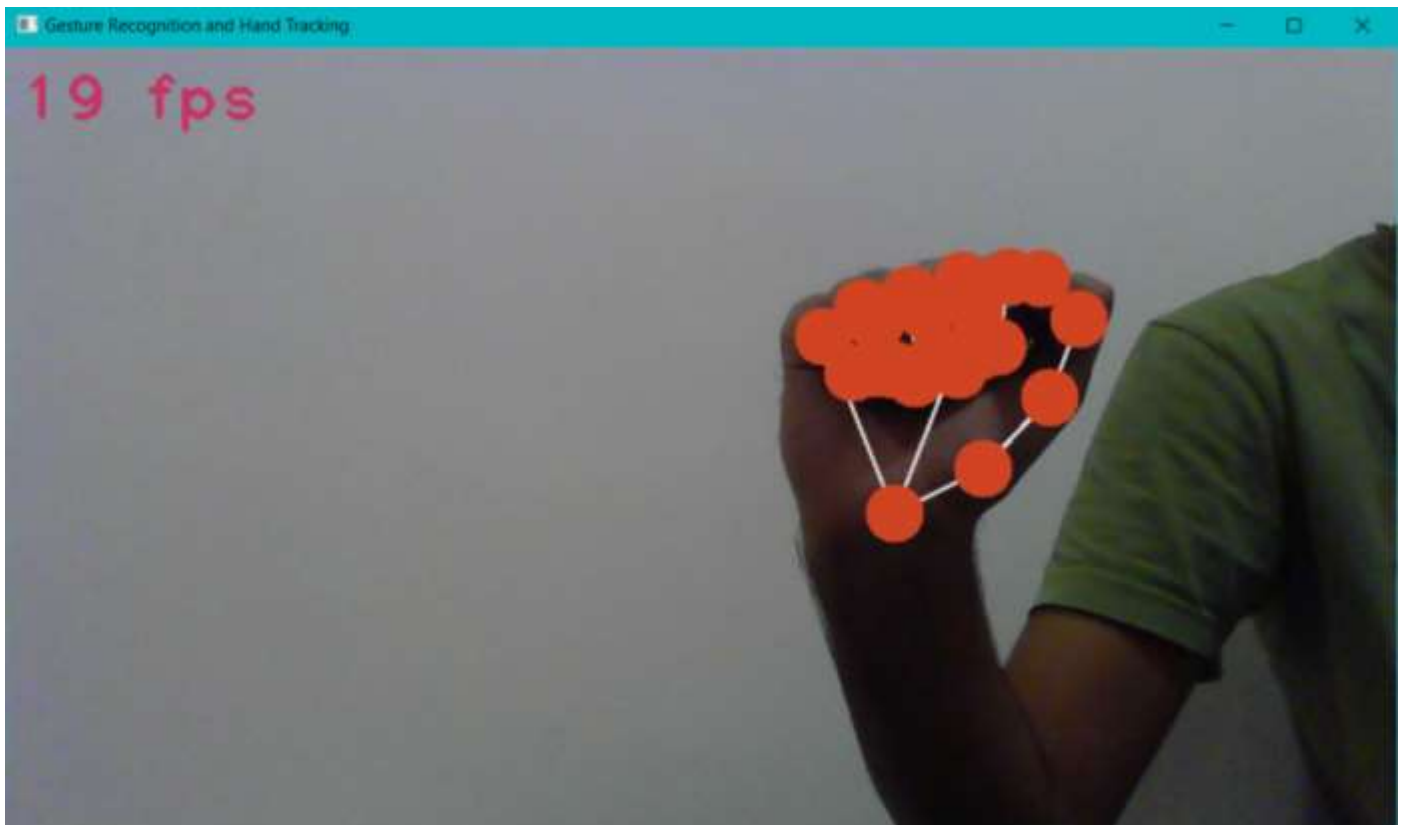
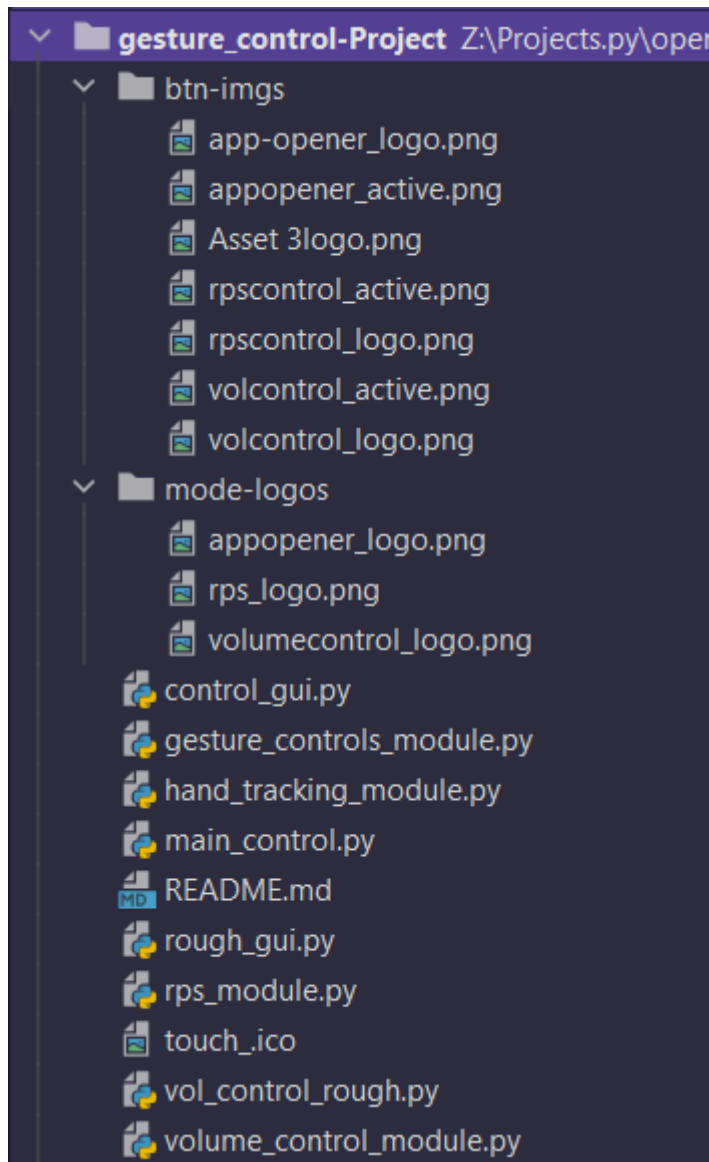


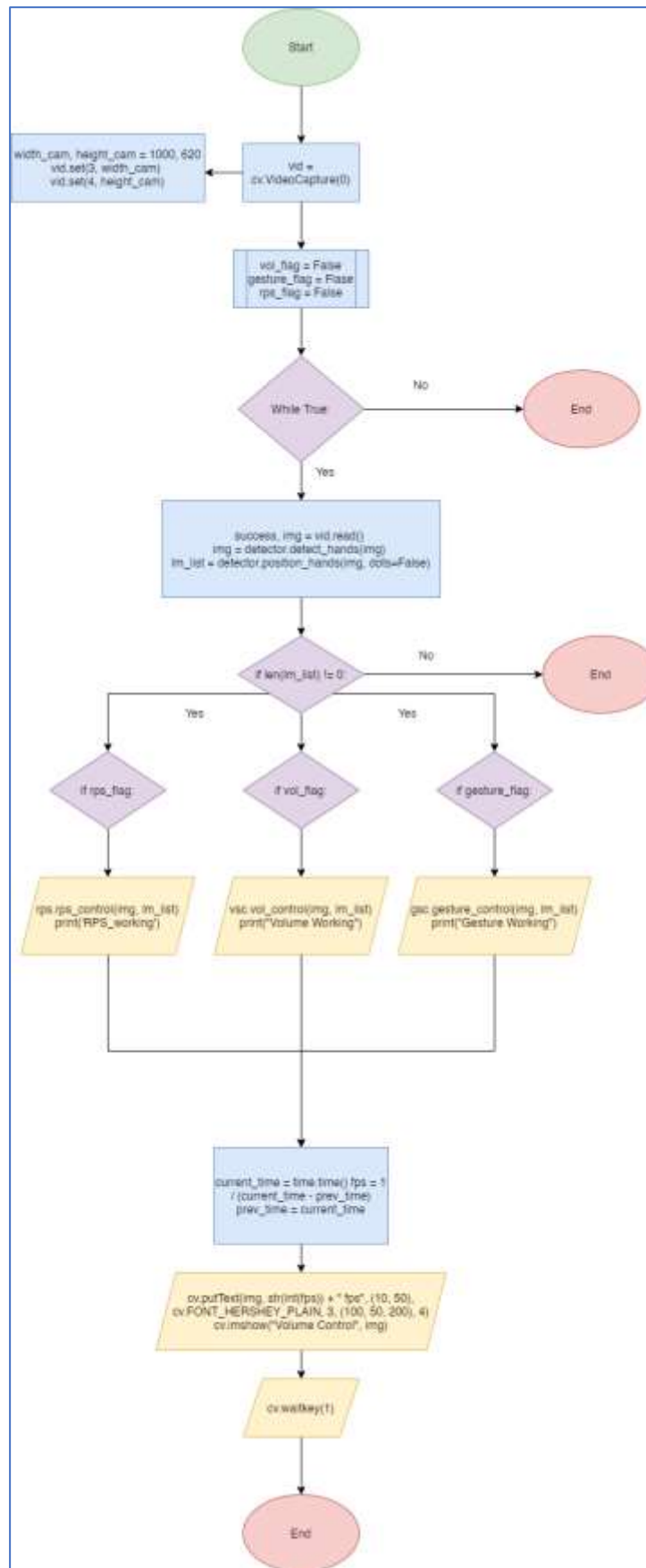
Figure 4- Fist gesture recognised

Code and Structure-

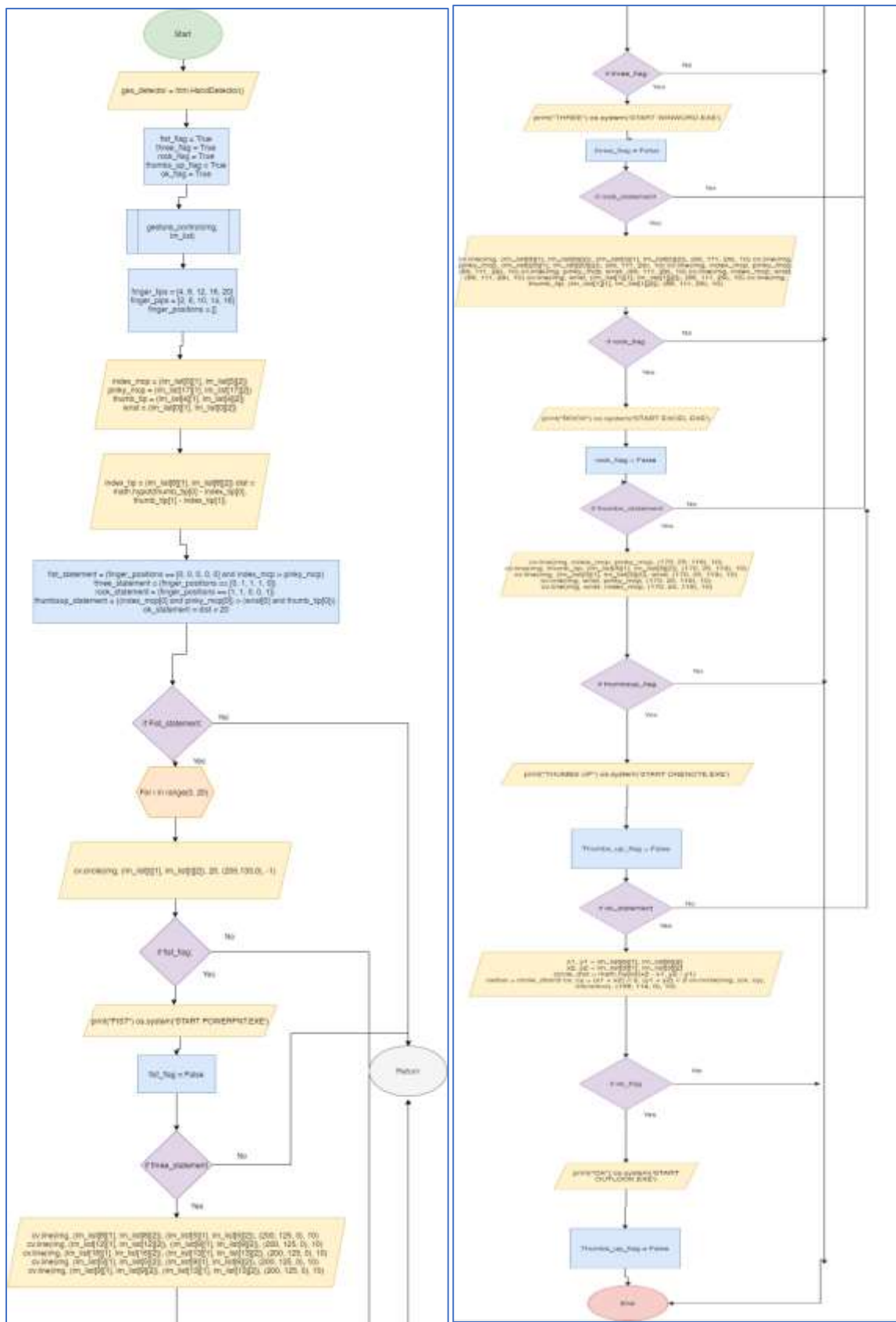


Code- <https://github.com/Avinier/Gesture-Control-App> or
<https://github.com/DhruvParmar10/Miniporject>

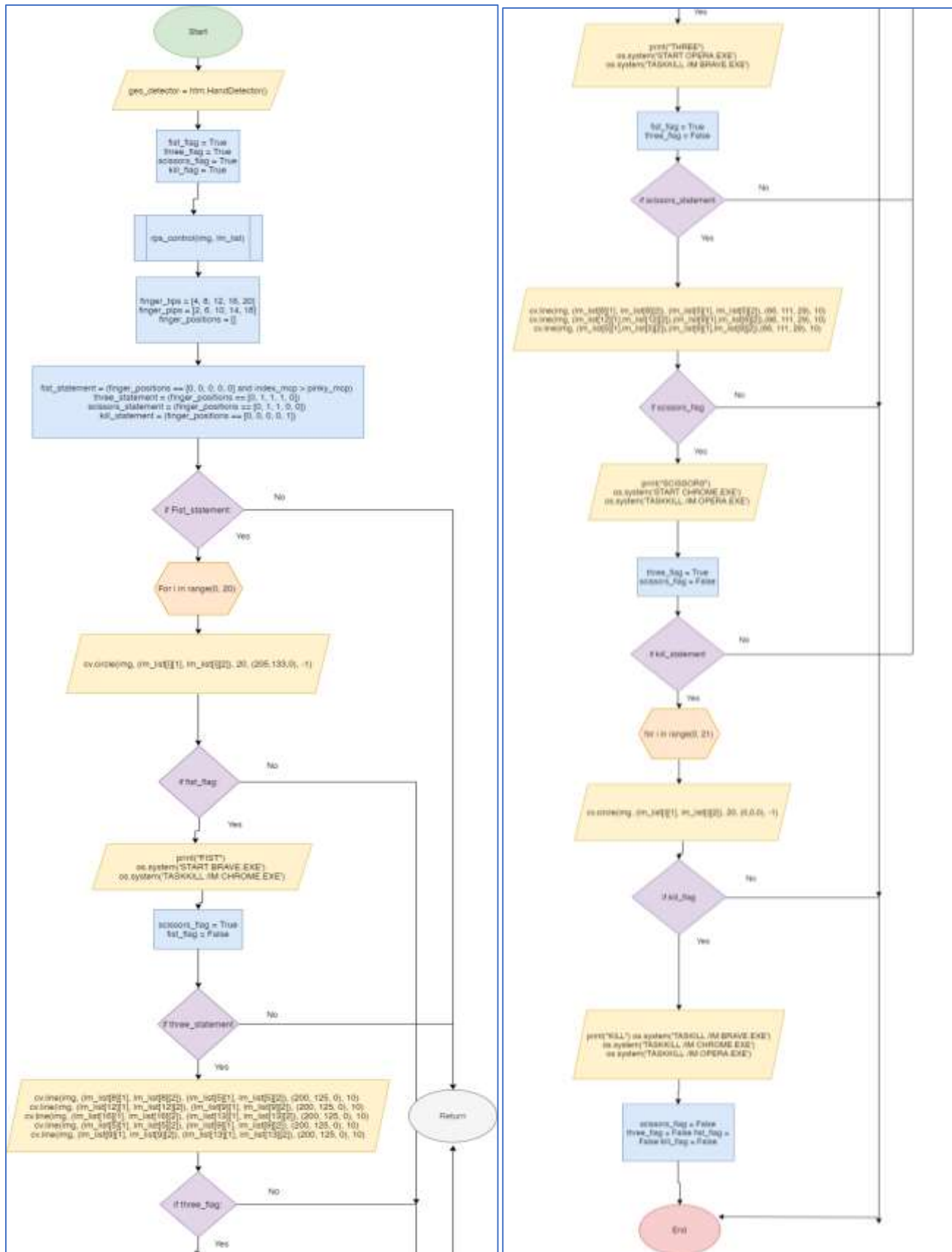
Flowchart-



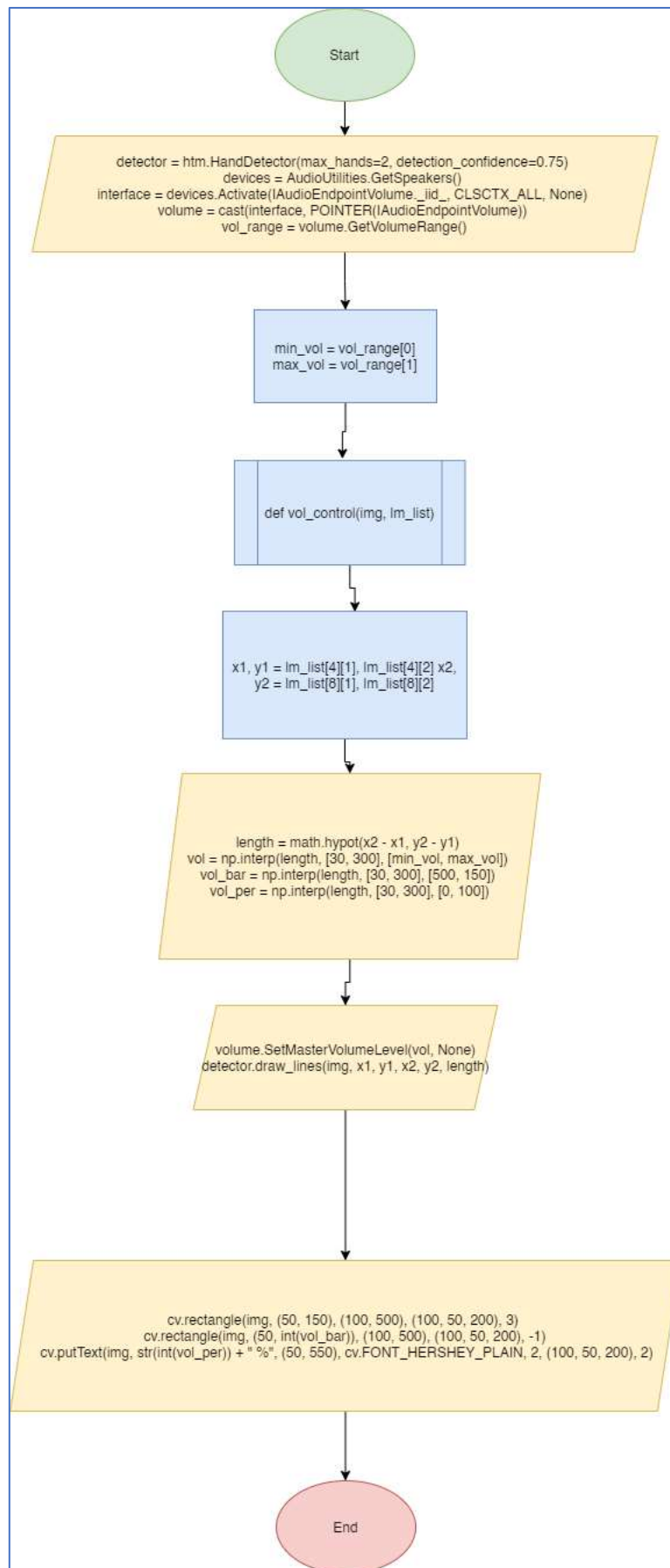
The Main Control



The Gesture Control Module



The RPS Module



The Volume Control Module

Thank
You