The Github repository for this project can be found in:

<https://github.com/EmilJohn24/LopezCV>

**Objective**

The primary objective for this project seems to be hand detection and doing actions on a canvas based on the position and gesture of the hand in frame. I will divide this up into the following modules: (1) hand detection, (2) hand gesture recognition, (3) canvas drawign, and (4) web service hosting for spectating the session.

**Hand Gesture Recognition**

I found an interesting paper on the matter here:

*Real-Time Hand Gesture Recognition Using Finger Segmentation*

<https://www.hindawi.com/journals/tswj/2014/267872/>

I am currently looking for web-based APIs that might be able to do the task of gesture detection for me

On this matter, I found this article:

<https://ai.googleblog.com/2019/08/on-device-real-time-hand-tracking-with.html>

Within this article, I found an interesting open-source library I could quite possibly use.

*Mediapipe*

<https://github.com/google/mediapipe/>

However, I might not choose to take the directions laid down above. For this, I might turn to a simple implementation found in this article:

<https://gogul.dev/software/hand-gesture-recognition-p1>

<https://gogul.dev/software/hand-gesture-recognition-p2>

I will now test the code in Jupyter. I shall post the results of this sampling below. The results can also be found in a notebook in the sampler folder in the root directory of this project

This previous example above needs **imutils** installed for python, so the article below must be followed:

<https://stackoverflow.com/questions/37382296/anaconda-python-install-imutils-in-windows10>