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PROJECT REPORT

< A.I. Virtual Mouse and Brightness Control with gesture using Open-CV >

Open CV is a library of programming functions mainly aimed at real-time computer vision .Originally developed by Intel , it was later supported by Willow Garage then Itseez The library is cross-platform and for use under the open-source Apache 2 License.

Open CV is a great tool for image processing and performing computer vision tasks.It is an open-source library that can be used to perform tasks like face detection, objection tracking, landmark detection , and much more. It supports multiple languages including python, Java, C++.

DOCUMENT VERSION HISTORY

The files are under one github repo
Download or clone and you are good to go!

Version	Author	Date
1.x	Rohan C	28-02-2022

Current process analysis

The script will turn on the camera using Open-CV and will wait for gestures. The finger movement will act as an input here .

High level description

For the Brightness script you need not have a GPU however to run the A.I. Mouse clicker it is recommended to have a GPU.

The process is used to….

The rough way to run the repo> :

1. <Create venv >
2. <clone git repo >
3. <install requirements and run the script>

Systems involved

The packages list will be available in the requirements.txt file.

System	Used for	User role needed
<Win x64 Machine>	<platform>	<Script is developed focusing the Winx64 Machine >
<WebCam>	For Input	Acts as an input source providing gesutres.
<GPU (recommended)>	Fast rendering	Heavy libraries have been used. Make sure you also have a GPU for smooth experience.

Possible exceptions

The directories need to be navigated manually sometimes in case of Pycharm
Also the requirements need to be installed in the same directory.
Make sure you try to use windows machine.".

Exceptions are special cases and rules that can influence and even stop the smooth running of the process.

Logic Exceptions

The window for input is kept small to view the whole screen
Make sure you use it as a trackpad.
Make a long hold click to see the script do action.

System Exceptions

Make sure you freeze the requirements to push for production
The packages versions may change in the future.
Venv is a better option for cross platforming.

And you are done*! Best of luck for your RPA project!*