README

Introduction

This Python script enables real-time eye tracking and eye blink detection to control mouse movements and clicks. It utilizes OpenCV for video processing and MediaPipe for precise face landmark detection, integrating with PyAutoGUI for controlling the mouse.

Installation

Prerequisites
- Python 3.x
- Pip (Python package installer)

Libraries
This project requires the following Python libraries:
- opencv-python (cv2)
- mediapipe
- pyautogui

Install the required libraries using pip:

- pip install opencv-python
- pip install mediapipe
- pip install pyautogui

Usage

To use this script, ensure your webcam is connected and properly set up. Run the script in a Python environment. The program will open a window showing the live video from your webcam. The script tracks specific facial landmarks to control the mouse pointer, and detects eye blinks to perform mouse clicks.

How it Works

The script continuously captures frames from the webcam, processes them to detect facial landmarks using MediaPipe, and translates these coordinates to screen positions. Specific landmarks around the eyes are monitored to determine if an eye blink occurs, which triggers a mouse click.

Troubleshooting

If the mouse pointer does not accurately follow your eye or if clicks are not registering properly, ensure that lighting conditions are adequate and that your face is not too close to the webcam. Also, check that the webcam is configured correctly in your system settings.

To try the code:

https://colab.research.google.com/drive/1sF2ImXxCbYULe22AS8svlak BzcprFmxJ#scrollTo=Ygj_Eq6TidOn

By: Wasel , team number 118 , idea number 1565