Python Project Report

Automatic Face Tracker

01286121 Computer Programming

Software Engineering Program,

Department of Computer Engineering,

School of Engineering, KMITL

By

65011331 Kawin Thimayom

Introduction

The Automatic Face Tracker is a software that uses video feeds to detect and recognize faces in real-time. It utilizes the open-source face_recognition library to compare the faces detected in the video frames to a database of known faces. When a match is found, the software displays the feed of the corresponding camera in the GUI and logs the date and time of the detected face.

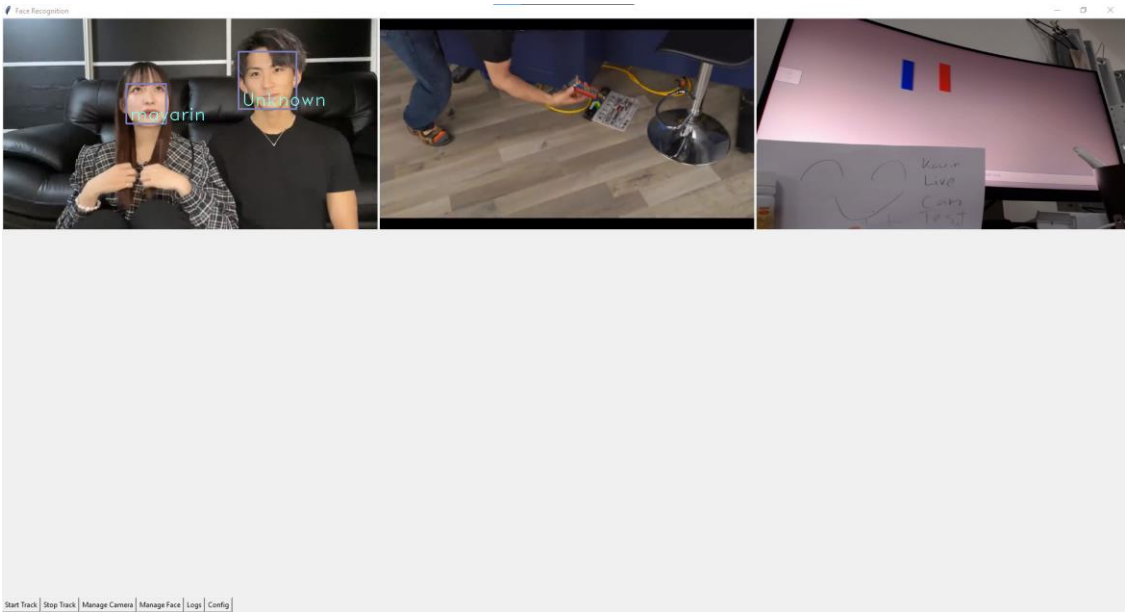
The software has a user-friendly graphical user interface (GUI) that allows the user to easily add or delete camera feeds. It uses the OpenCV and FFmpeg library to interact with a variety of camera systems, including file systems, URL streams, IP cameras, and USB hardware cameras. This allows the user to have a wide range of input formats to choose from.

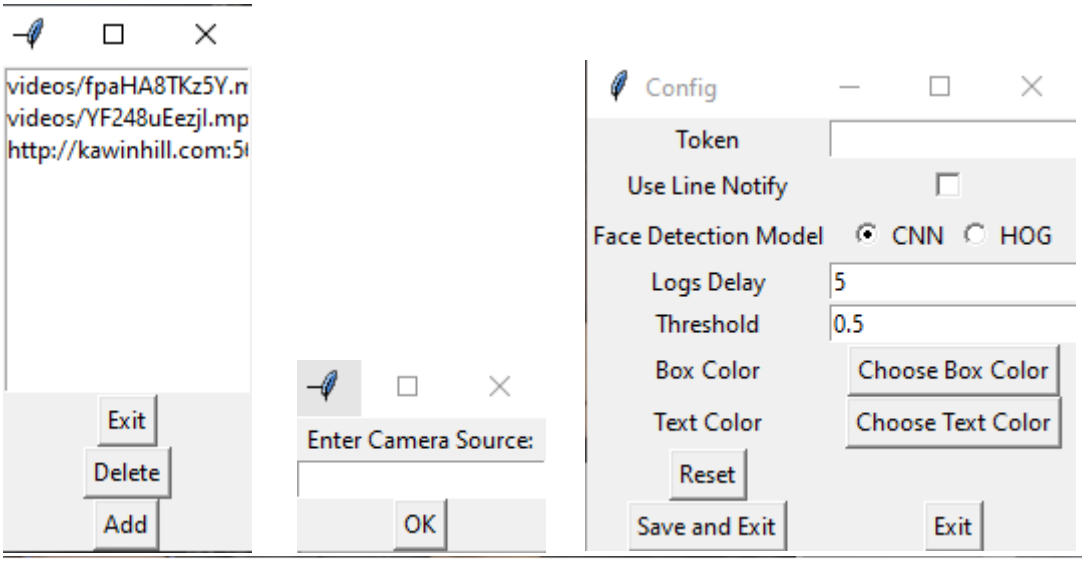
The logging feature of the Automatic Face Tracker can be used to track the attendance of employees in a building or to monitor the activity of individuals in a specific location. It can also be used to track the dates and times that authorized individuals access a particular area or facility.

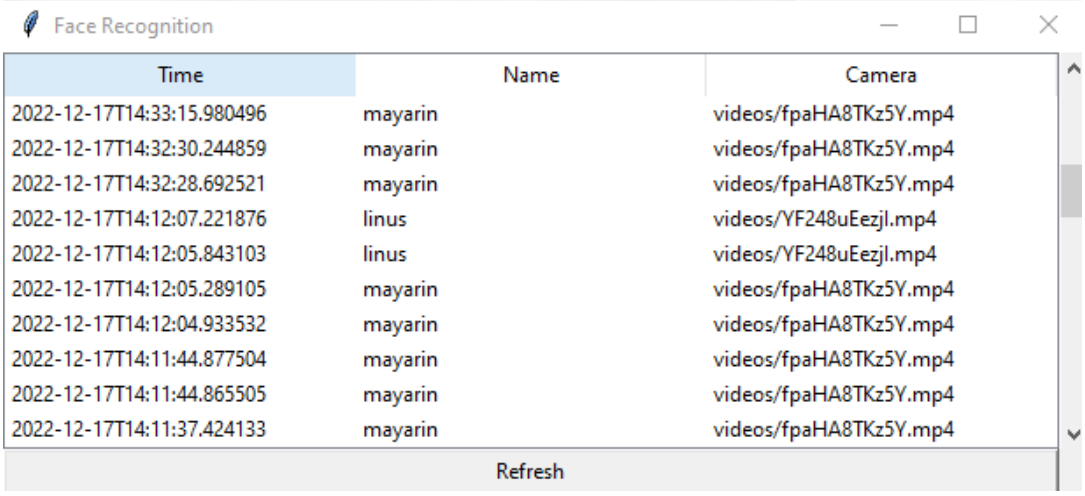
There are many potential applications for the Automatic Face Tracker. For example, it could be integrated with a door lock system to automatically unlock the door when an authorized face is detected. In schools, it could replace traditional attendance checklists with an automatic system.

To improve the performance and scalability of the software, the processing of the video streams can be distributed using edge computing. Alternatively, in small businesses, a headless server could be used to handle the processing load, with the client using a monitor to view the processed information.

Example Screenshot(s)







Code

https://github.com/kawinhill1112/pyFaceRec/