BATCH 08

Final Review

Dr. Mahalingam College of Engineering and Technology
Pollachi, Tamil Nadu, India

Department of Information Technology

Smart CCTV

Guided by
Dr.S.Ponni@Sathya
Assistant Professor(SG)
Information Technology

Submitted by
LOGITH N(19BIT038)
KAMESHWARAN M(19BIT056)
JEEVA S(19BIT064)

OUTLINE

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ABSTRACT

- SMART-CCTV is the use of automatic video analysis technologies in video surveillance applications.
- Since, we are using Computer vision in this project there is no need for anyone watch the boring surveillance videos for 24/7.
- Using this project, we can reduce Human work, Time, Money which is more needed in the surveillance field.
- Our Project aims at providing one such idea to ensure safety and security of one's own property.
- Smart-CCTV can perform Monitoring (which records video when face is detected), Authorize (Records video when unknown person is identified), Identify (Identifies the missing object), Record (Records video like a normal CCTV).

INTRODUCTION

- Smart CCTV is a Python GUI application which can run on windows, uses webcam and Computer vision to provide surveillance ability to your laptop/pc and has number of features which are not in normal CCTV
- Since, We are using Computer vision in this project there is no need for anyone watch the surveillance videos for 24/7 .Using this project we can greatly reduce.
    1. Human work
    2. Time
    3. Money

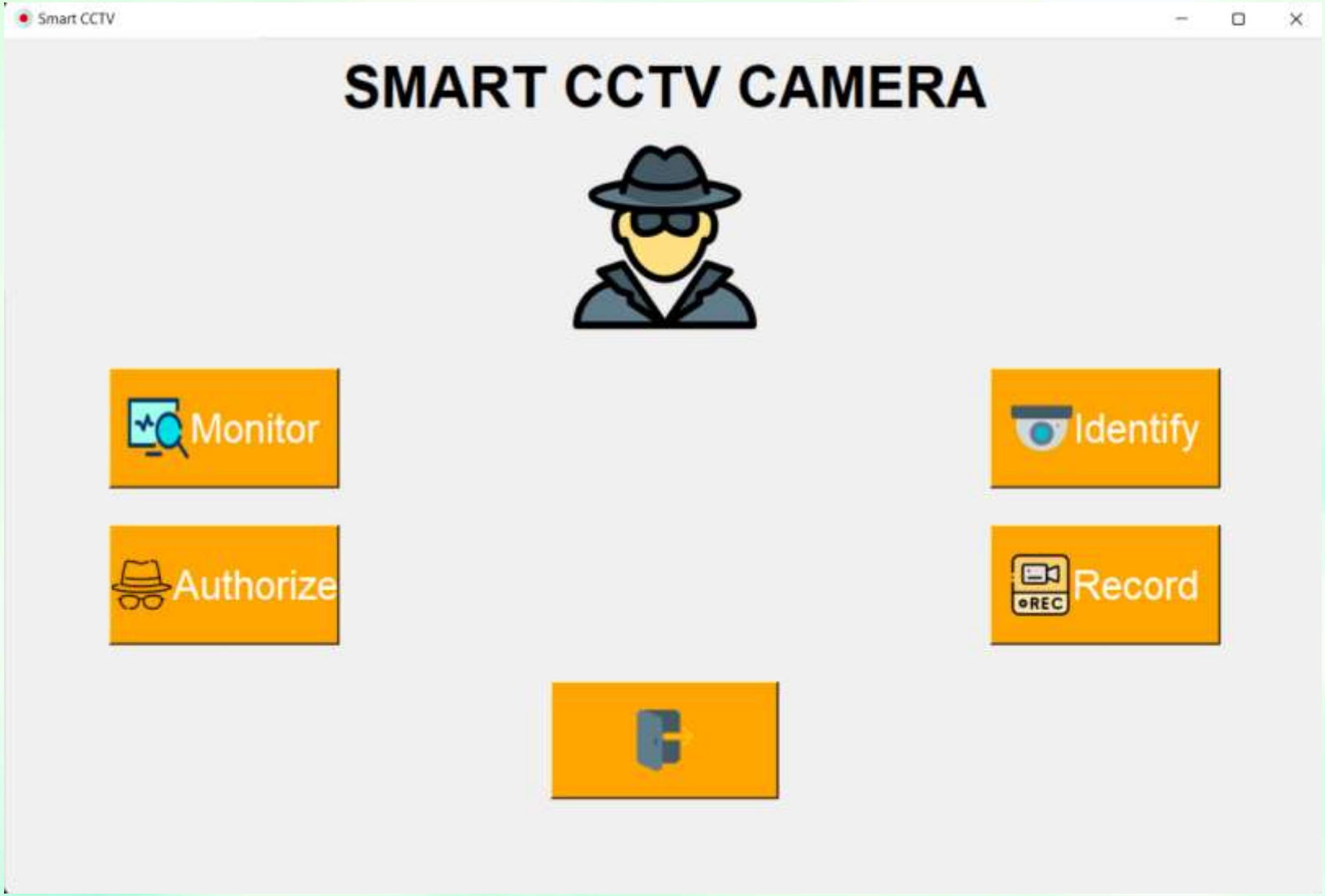
OBJECTIVE OF PROJECT

- CCTV, as a tool for security, meets the objectives of **theft reduction, asset protection, security investigations, providing evidence and deterrence**.
- Our Project aims at providing one such idea to ensure safety and security of one's own property.
- The main objective of the project is **to develop an Intelligent CCTV Project** using Computer vision so that there is no need for anyone watch the boring surveillance videos for 24/7.

MODULES:

1) Monitor
   - To monitor the surveillance for any unauthorized person entering
2) Identify
   - To identify the missing object
3) Authorize
   - To record video when unknown person is identified
4) Record
   - To record the surveillance like a normal CCTV

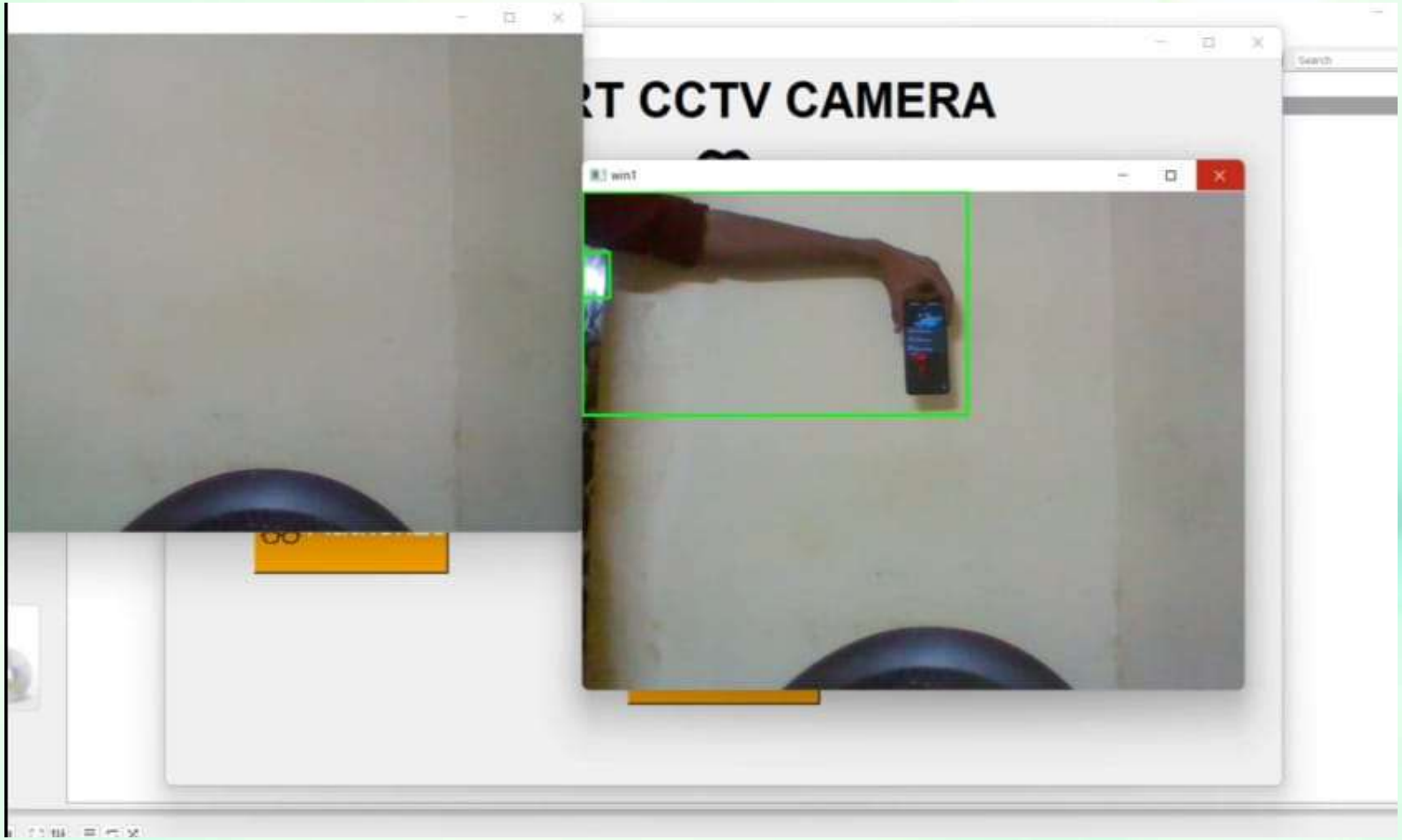
UI DESIGN:


Smart CCTV
SMART CCTV CAMERA
Monitor
Identify
Authorize
Record
REC

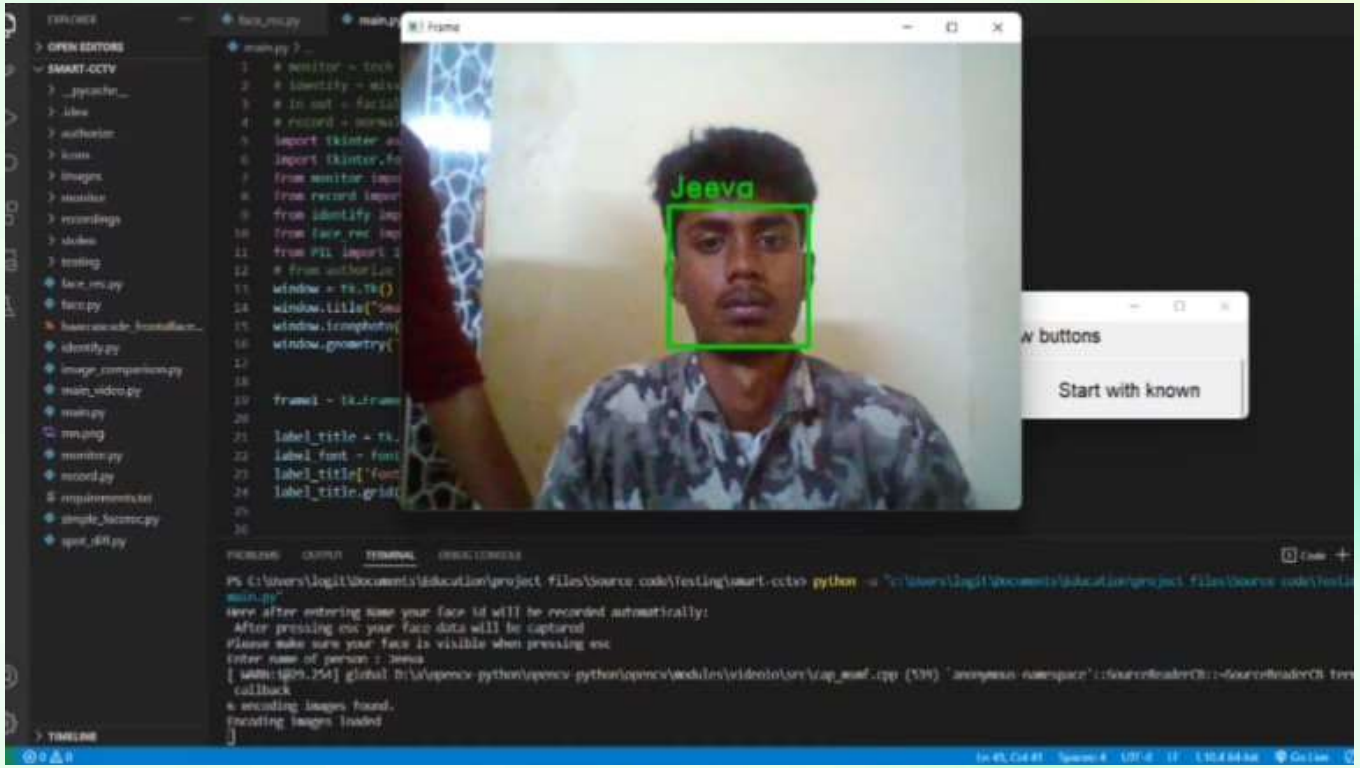
Implementation:

	Records video when face is detected
	Records video when unknown person is identified
	Identifies the missing object
	Records video through webcam
	Exits the application

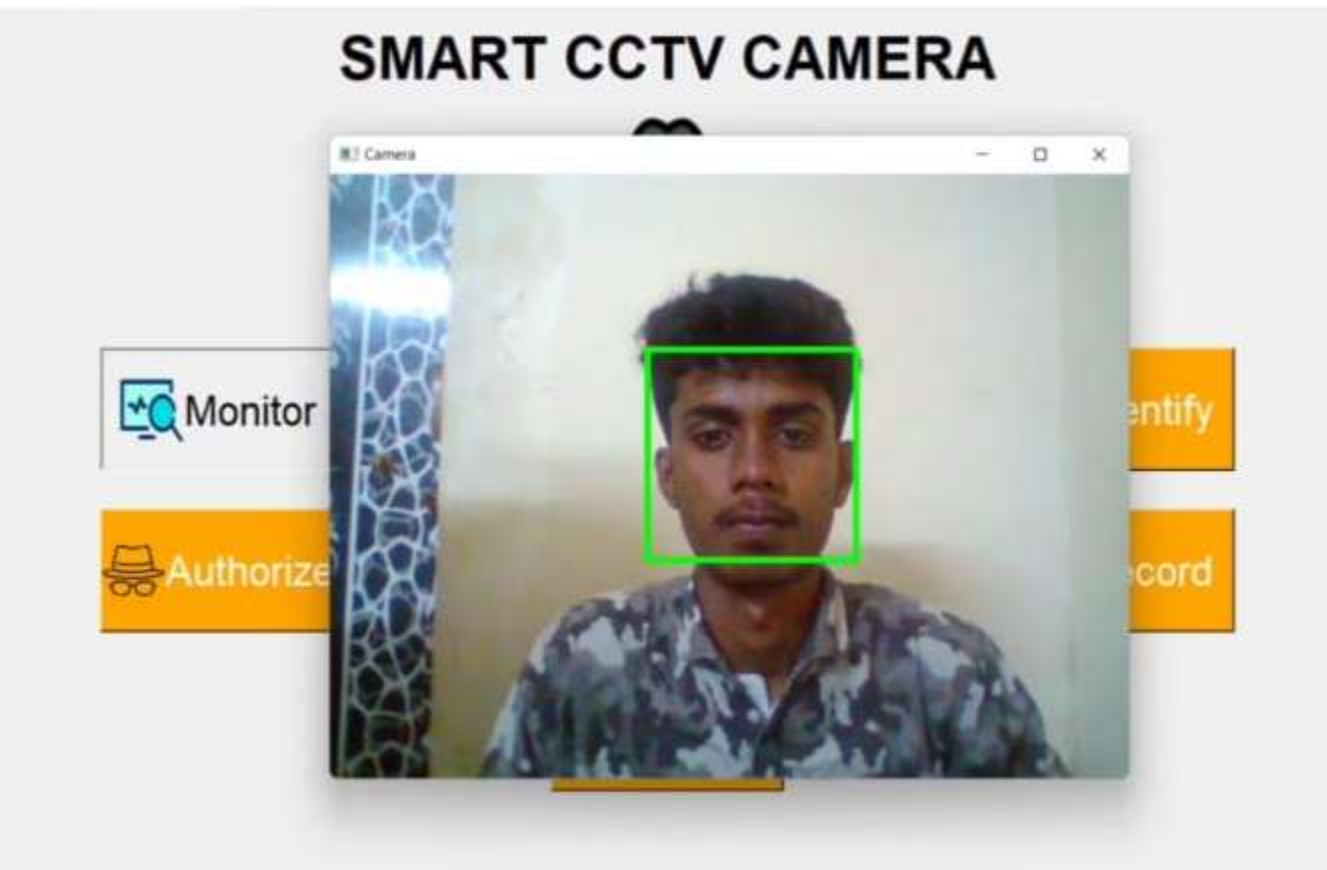
Identify:



Authorize:



Monitor:



Recording:

SOFTWARE AND SYSTEM REQUIREMENTS:

Software Requirements:

Windows/Linux/Mac OS any version, hence it can run on any platform. Python3, it need python to be installed in your system to run this successfully. Packages in python to be installed are OpenCV, skimage, NumPy, tkinter.

Hardware Requirements:

- Working PC or Laptop
- Webcam with drivers installed
- Microphone

REFERENCES:

For making this project we are going to refer the following Websites and YouTube tutorials:

- Waterfall model
- Structural Similarity from medium
- Face detection
- OpenCV

CONCLUSION & FUTURE WORK:

Below are some future work are going to be added on this project:

- Adding in-built night vision capability.
- Sending footages Directly to their mobile via MMS
- More feature such as
  1. Deadly weapon detection
  2. Accident detection
  3. Fire Detection

THANK YOU☺