Université Paris-Est Créteil
International Master of Biometrics and Intelligent Vision

PROJECT DEFENCE

Face Recognition for Attendance Management

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Outline

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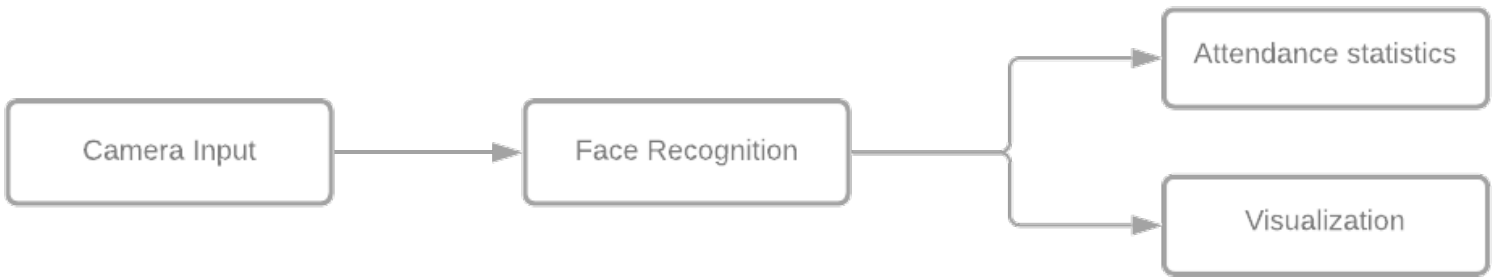
Introduction

- Recording manually attendance is time consuming;
- Student attendance and performance are correlated;
- World is turning toward automation using smart systems;

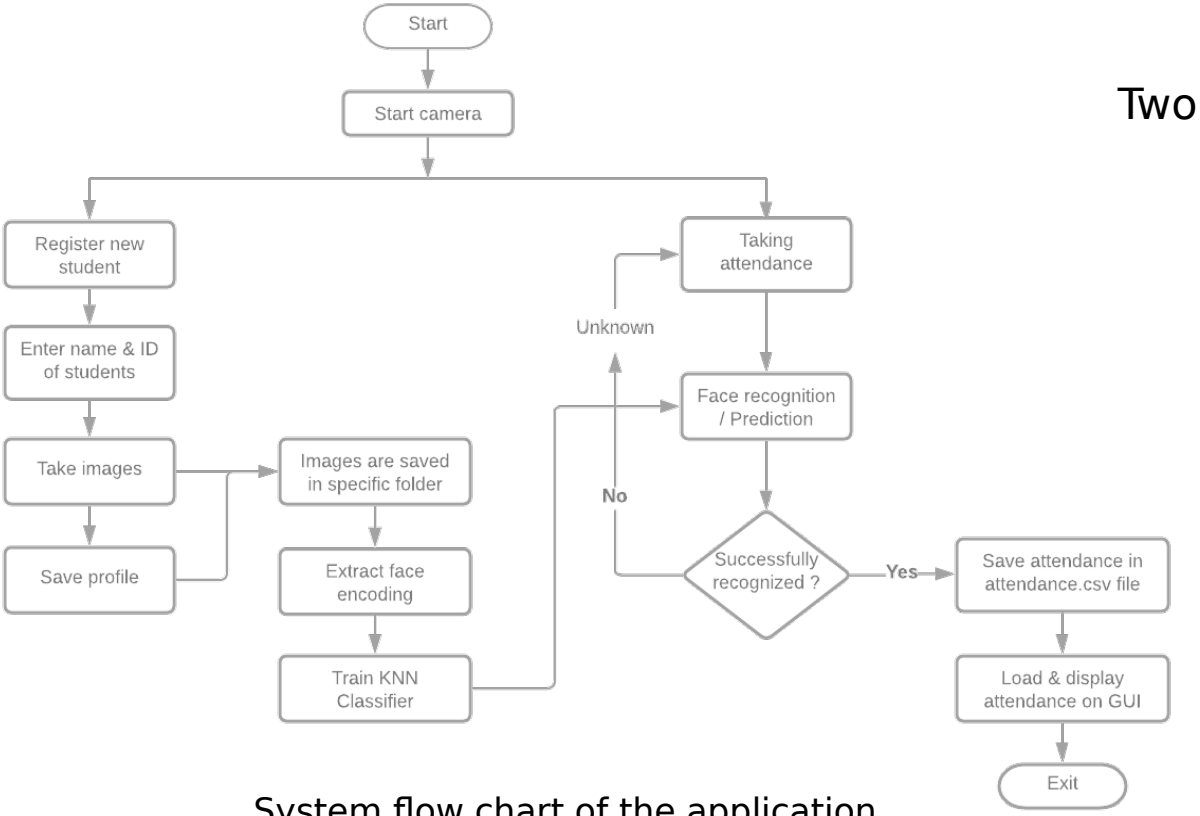
Project objectives

- Develop a computer-vision system to manage student attendance in classroom;
- Generate statistics of student attendance;
- Integrate the system with a GUI;



Project Diagram

System flow chart



System flow chart of the application

Two parts :

- Registration flow part
- Recording attendance

Tools and libraries used

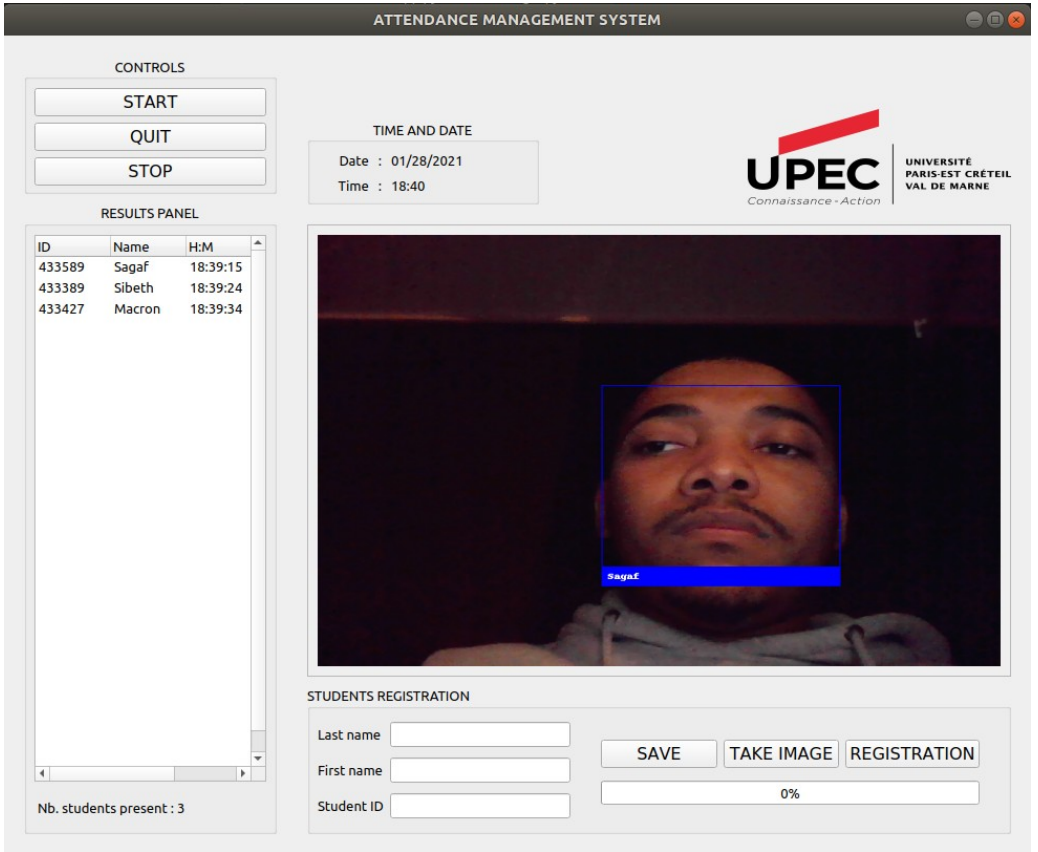
- Programming language : Python
- Use of ***face_recognition*** library to extract face encoding;
- k-nearest-neighbors (KNN) algorithm for face recognition;
- PyQt5 to build graphical interface;
- And more libraries : scipy, OpenCV, Numpy, os, datetime, ...

Results

	A	B	C
1	STUDENT_ID	STUDENT_NAME	DETECTION_TIME
2	433625	Sagaf	23:32:23
3	433325	Sibeth	21:42:06
4	433035	Merkel	21:42:15

Attendance on the CSV file

Results of final application



Graphical interface of the application

Conclusion

- Need to improve the code structure of the application for better performance;
- The project help me to master python programming and improve my coding skills in python using advanced concepts like multiprocessing and oop;

Thanks for your attention !

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