FARCO

A FACE RECOGNITION PROJECT
MS ENGAGE 2022

T Ramya
Btech CSE - AI & Robotics
VIT Chennai

/What Is FARCO?

Ever found calling out each and every name in a classroom to mark attendance time consuming? Ever wondered if the biometrics you give to your organisation for marking attendance is really kept secure? Ever seen your college mates give their friend's attendance and their own?

Well! FARCO is here to solve all your problems

Farco which stands for **FA**cial **ReCO**gnition is a web application that runs on any computer with a webcam and helps organisations manage attendance in an easier and more efficient way! Register your organisation and let FARCO take care of all the hard work for you.

/Tech Stack Used

01 **Python**

> A very versatile programming language which is used for the server side coding of FARCO.

02 **HTML, CSS, JS**

> The building blocks of a website and the heartbeat of UI/UX. That is why I have coded FARCO from scratch w/o using any templates to make it as user-friendly as possible.

03 **Flask & SQLite**

> A highly flexible and scalable python web framework paired with a light weight database that helps FARCO perform its best.

04 **OpenCV**

> An incredible library which is the backbone of FARCO. Along with the Face-recognition library, it recognises faces to mark attendance.

/My Journey

Decision
MAY 4 - MAY 7

Exploring the various problem statements and deciding on facial recognition as it has always intrigued me.

Design
MAY 8 - MAY 11

Spending hours on designing an effective system and that is flexible and can be implemented in real life. It should also be useful and scalable.
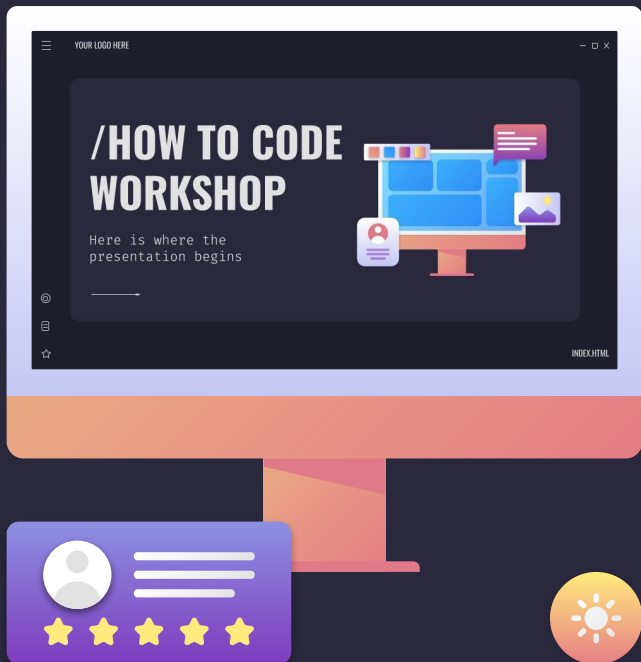
Coding
MAY 12 - MAY 26

Choosing the proper tech stack and learning its fundamentals. Understanding how facial recognition works and slowly bringing FARCO to life by making the UI/UX as pleasing as possible.

Testing
MAY 26 - MAY 28

Testing if all the functionalities are working properly, debugging all the unexpected errors and solving all the challenges that I faced while building FARCO.

/What makes FARCO stand out from the rest

- ➜ It is an extremely flexible system that can be used by any type of organisation.
- ➜ It is very easy and simple to register students/employees details and get started.
- ➜ Does not require multiple images of the same person thus saving space.
- ➜ Scalable and practical when it comes to registering and handling a huge number of people.
- ➜ Gives the user the freedom to choose how long it should take attendance for.
- ➜ Lets people view their attendance without needing to create an account.
- ➜ An easy to navigate website that can be straightforwardly understood by anyone.
- ➜ Allows user to add or delete information whenever required.

/Challenges I faced

Creating Tables

A good webapp should have an efficient database which does not store redundant information. Therefore I spent a lot of time in designing a proper schema and then creating the tables

Designing Website

I wanted FARCO to have a character and be as pleasing and user-friendly as possible. So I spent a lot of time on designing it from scratch in order to make it unique and original

Infinite Loop Issue

While implementing the face recognition part I ran into an unexpected issue of the program entering an infinite loop and not being able to come out as flask is synchronous. I tried multiple ways and finally decided to set a timer to get out of the infinite loop
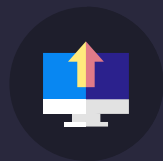
/Future Scope

Adding more functionalities such as letting the user manually enter attendance as well in case of an unexpected scenario.

Letting the user update people's information. For instance if the uploaded image is not clear or is wrong then user can update that record alone.

Implementing a search option for the user to access information easily in case of a huge classroom or department.

Deploying FARCO!After adding the extra features and designing FARCO to be compatible across various platforms, It will be ready to help organisations around the world with their attendance management!

/THANK YOU!

CREDITS: This presentation template was created by **Slidesgo,** and includes icons by **Flaticon,** and infographics & images by **Freepik**