Ahmed Mohammed Amer

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Objective

Enthusiastic, results-oriented and hard working Software engineer. Working on different projects helped me adopt to changes quickly and made me a mature team worker. I am able to work well both in a team environment as well as using my own initiative. I am able to work well under pressure and adhere to agreed upon deadlines.

Relevant Skills

`Python` `HTML` `CSS` `Tailwind` `JavaScript` `FetchAPI` `TypeScript` `Docker` `Flutter` `React` `Astro` `C++` `Linux` `Git` `FastAPI` `SQLAlchemy` `Image Processing` `Machine Learning` `OpenCV`

Education

Ain Shams University   **Cairo**
Bachelor Degree in Communication Engineering   **June 2023**

Graduation Project

The project revolves around creating smart solution that would improve the campus by utilizing Internet of things. I implemented a system that automatically register a student for attendance without the need to waist time or disturb lectures

Image Processing (Facial Recognition)
- Detect the faces in a given image using openCV and the HOG algorithm
- Extract key features from each face in submitted images using an OpenFace pertained model

Frontend Application Using REACT
- Student upload images used for the facial recognition machine learning model by OpenFace
- Create dashboard for the users to view the attendance for each lecture and attendance rate
- Protect routes for logged in users and special routes for admins
- Admin access to create courses manually adjust attendance if needed

Backend Server Using FastAPI
- Design a Restful API that handles the incoming request
- Design a backend that could handel the various request that is submitted by the user
- Manage users login and sign up request using Json Web Tokens for authorization
- Create middleware to process the images and store the identifying feature for each user
- Create routes for login, sign up, authentication, upload image, add or delete courses, and IP cameras

Deployment Docker and Vercel
- Frontend (React) is deployed on vercel.com
- Backend (Restful API) is deployed on railway using a docker container

Relational Database (SQLalchemy-SQlite)
- Design the database that stores all data and attribute for students and course
- Create a one-to-one relationship with the student table and image table
- Create a many-to-many relation between student table and course table

Leadership

Student Representative
- Student Representative for 80 students where I help facilitate the communication between the teaching staff and the students and helped organize for multiple events

ASU Racing Team
- Media Team member with 100% project completion rate
- Render and design formula-1 Car and Design Banner, roll-up and Social media posts

Work Experience

Systel (Motorola)   Smart Village
Trainee
 – Design an access point system with the aim of connecting remote areas to a central tower Using Link Planer to figure out the obstacles in the way of the master-slaves, then log on the device to make basic configuration and give an IP address
 – Understand the infrastructure of the two way systems and the design requirement according to the environment and the terrain, work on the electronics and the configuration or programming of the walkie-talkie
 – Install Optic fiber cables, make connection using fusion technique and pig tails,and test using laser and power meter. Understand how to decide the appropriate cable to use according to requirements
 – Aligning the microwaves for a clear line of sight point to point (antennas panning), then Use link planner for performance by checking for noise interference and find the clearest frequency. Understand Different Radio Link Mode Layout
 – Design and configure surveyance systems by setting up switches, cameras, NVR or DVR, then setting up a control room with a monitor to display the camera feed. Understand the concept of PoE power over Ip

National Telecommunication Institute   Smart Village
Trainee
 – Create deploy and manage Virtual Machines across clusters of Hosts
 – Create storage system for the virtual machines
 – Create security group and administrative level for managing the virtual machine
 – Used KVM, CNA and Linux

Projects

Social Media App (Instagram Clone)
Designed a social media app that is inspired by Instagram. The App include authentication and a real time data base using server less cloud technologies

Recipe App (World Wide Recipe)
Web App that displays most recent recipes from an API with multiple views using react as a framework for state management and pure css for styling

Photo Search App
This App that uses pixabay API to search images based on keywords that the user inputs, once the images are retrieved the images are displayed on your screen.

Covid-19 (Virus) Simulator
This project aims to simulate virus spreed among a group of people in different zones. The zones limit the spread of the virus because of lower number of sick in each zone

News Summary App
News app that uses Next JS to utilize server side rendering that includes fetch the date and rendering the html page then pushing it to the client

Runner/Mario Video Game
Developed a 2D Mario Like game with character and enemies with complex enemy generation and check for objects collision with each other

Programming Skills

 – Proficient Languages (Python, JavaScript, C++, HTML, CSS, Dart)
 – Proficient Frameworks (Flutter, React, Flask, FastAPI, Next JS)
 – Proficient in GIT version control (GIT)
 – Powerful skills in API development, specifically for web use
 – Experienced in Unix/Linux environment and Bash scripting.
 – Experienced with ORMs (SQLalchemy)
 – Working Knowledge of databases (MySQL, postgreSQL)
 – Object Oriented Programming and Functional Programming
 – Great Documentation Skills
 – Strong communication expertise and interpersonal skills