

Hossameldin Hamza

Computer Engineer
6th of October, Giza, Egypt

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I am a proactive and committed software engineer with experience in backend and frontend development, along with a light DevOps background, specializing in backend engineering. I thrive on learning and tackling new challenges, always striving to build highly optimized solutions. I believe optimization is a responsibility, not a luxury. I am always looking for opportunities to grow, innovate, and make an impact.

WORK EXPERIENCES

Software Engineer

AIC-MCIT | Aug 2024 - Present

- Worked on a PWA (Progressive Web App) to interface with ASR (Automatic Speech Recognition) service with the following main functionalities:
 - Capturing and recording audio, displaying real-time transcriptions from the ASR service
 - Auto-saving all user data (including audio samples) in IndexedDB.
 - Play audio samples stored in IndexedDB using Audio Context
 - Created a CI/CD pipeline to automate linting, docker image building, and deployment.
- Worked on administration server API to manage application licensing and activations:
- Technologies used: React, Redux, IndexedDB, PostgreSQL, Docker, FastAPI, GitlabCI

Software Application Engineer Intern

Valeo Cairo | Jul 2022 - Nov 2022

- Developed a cross-platform desktop application using Electron.js to send well-structured new software release notification e-mails
 - Responsive GUI to ease data filling following the MVC pattern
 - Send the email with the rendered body from the app
 - Technologies used: HTML, CSS, Bootstrap, Nodejs, Electron.js
- Extended CLI version to automate new release e-mails by Jenkins
 - Implemented development and production loggers
 - Made a list of CLI flags to configure email body and format
 - Setup Docker container to deploy the CLI to CI machine
- Developed automation scripts in Bash and Python

ICPC-NU Community | Competitive Programming Community

Nile University | Oct 2020 – Present

- Gave periodic sessions about Algorithms, problem solving, and improving code performance.
- Participated in designing the training road map of the community.

EDUCATION

Exchange semester in Computer Engineering

Riga Technical University | Jan 2023 – Jun 2023

Fully funded merit based exchange semester to study in RTU, Latvia

BSc in Computer Engineering

Nile University | Sep 2019 – Jul 2024

Full scholarship holder at Nile University

CGPA: 3.96

PERSONAL PROJECTS

Identifying Egyptian Artifacts & Landmarks API



Graduation Project | Jan 2024

An API utilizing ResNet50 Architecture with Knowledge Transfer (KT) to identify Egyptian monuments/Landmarks and provide relevant information. The API aims to enhance tourists' experience by providing historical context and relevant information about the rich cultural heritage of Egypt.

Technologies used: Python, Pytorch, Flask, PostgreSQL, AWS (EC2), Docker, Circleci

University Schedule Generator



Open Source | Jan 2024

This is an API written in Node & Express to generate all possible schedules for the specified courses using backtracking algorithm with its frontend written in React. Technologies used: TypeScript, Node, Express, Mysql, AWS (EC2), Docker, Circleci, HTML, CSS, Bootstrap, React, Vercel Python implementation of the algorithm

Smart Home



Open Source | Jan 2022

A full-stack web app that gives full control of all home lights, outlets, and appliances from any device connected to the internet. Technologies used: HTML, CSS, JavaScript, Bootstrap, Java, Spring Boot, PostgreSQL, Raspberry Pi, Python, Fritzing.

TECHNICAL SKILLS

Programming languages

C, C++, Python, JavaScript, TypeScript, Bash Scripting

Programming paradigms & skills

OOP, REST principle, CI/CD principles, Problem Solving, Algorithms, Data Structure

Electronics

Proteus, Node-MCU, Raspberry Pi, Arduino

Web Technologies

HTML, CSS, JS, Bootstrap, Node.js, Express, TypeScript, React, Mongo, SQL, Docker

Version Control

Git/GitHub

AWARDS & ACHIEVEMENTS

- Qualified to ACPC (Africa and Arab Collegiate Programming Championship)
2023 - Honorable mention
2022 - Ranked 63rd among Africa and Arab teams
- Participated in ECPC (Egyptian Collegiate Programming Championship)
2023 - Second place among Nile university teams
2022 - Second place among Nile university teams
- Participated in ACPC (Africa and Arab Collegiate Programming Championship) Kick-off 2022
- Participated in Google Hash Code
2022 - 60th all over Egyptian teams
- First place in Undergrad Research Forum 2021

LANGUAGES

Arabic (Native)

English (Professional)

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