HOSSAMELDIN HAMZA

Computer Engineer
6th of October, Giza, Egypt

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Proactive, reliable, and a fast learner. Strong academic performer and have secured and maintained a full scholarship to study computer engineering at Nile University. A competitive problem-solver who possesses high problem-solving skills. Worked on many web applications and Internet of Things projects. Keen to pursue a career in software engineering with a focus on back-end development.

WORK EXPERIENCES

Developed Back-End System for Sinai University mobile application

Sinai University | Mar 2023 - Jun 2023

- **Developed a back-end system:**
  - Designed database schema and migrations
  - Designed a RESTful API with authentication and authorization
  - Dockerize the application in node-alpine image
  - Setup Circleci pipeline to automate testing and deployment of the API
- **Technologies used:** Nodejs, TypeScript, MySQL, Docker, Circleci, DigitalOcean, Bash scripting

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**
  - Developed a responsive GUI to ease data filling following the MVC architecture pattern
  - Send the email with the rendered body from the app
  - **Technologies used:** HTML, CSS, JavaScript, Bootstrap, Nodejs, Electron.js

- **Extended a CLI version of the tool to be integrated with Jenkins to automate new release e-mails notifications**
  - Added development and production loggers
  - Made a list of flags to configure all the details of the email body and the tool itself
  - Added the CLI to an **Alpine Docker container** to be deployed on the CI machine

- **Developed automation scripts (in Bash and Python) for packaging and uploading modules to the remote repository, then used SSH to connect to a remote server to run these scripts**

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 – Present

Full scholarship holder at Nile University   CGPA: 3.96

PERSONAL PROJECTS

University Schedule-Generator   Open Source | Jan 2023

This is an API written in Node & Express to generate all possible schedules for the specified courses using backtracking algorithm.
Technologies used: TypeScript, Node, Express, Mysql, AWS (RDS, S3, Elastic Beanstalk), Docker, Circleci, MVC Architecture
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, Node.js, Express, Mongo, Raspberry Pi, Python, Raspbian OS, SSH, and Fritzing.

Course Registration System   Open Source | Jul 2021

A system written completely in c++ using graph theory. This system enables creating users, registering courses, showing the entire study plan that contains all the courses sorted in order.

TECHNICAL SKILLS

Programming languages
C, C++, Java, Python, JavaScript, TypeScript, Bash Scripting

Programming paradigms & skills
OOP, REST principle, CI/CD principles, Problem Solving, Algorithms, Data Structure

Electronics
Cadence, Proteus, Node-MCU, Raspberry Pi, Arduino, Verilog

Web Technologies
HTML, CSS, JS, Bootstrap, Node.js, Express, TypeScript, Mongo, SQL, Docker, Nginx, Postman, Electron

Version Control
Git/GitHub

AWARDS & ACHIEVEMENTS

- Participated in ACPC (Africa and Arab Collegiate Programming Championship) 2022
  Ranked 63rd among Africa and Arab teams
- Participated in ECPC (Egyptian Collegiate Programming Championship)
  2022 - Second place among Nile university teams
  2021 - Third 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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