HOSSAMELDIN HAMZA

Undergrad Computer Engineer

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🌐 ICPC Profile
📍 6th of October, Giza, Egypt

Proactive, reliable, and a fast learner. Strong academic performer and have secured and maintained a full scholarship to study computer engineering at Nile University. Possess high problem-solving skills and competitive problem solver. 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 | March 2023 - May 2023

- **Developed a back-end system including:**
  - Designed database schema and migrations
  - Designed a RESTful API to manipulate the database models
  - Authentication and authorization for student and admin accounts while giving admin accounts more privileges
  - Setup development and production database logger
  - Dockerize the application in node-alpine image
  - Setup Circleci pipeline to automate testing and deployment of the API
- **Technologies used:** Nodejs, TypeScript, SQL, Docker, Circleci, DigitalOcean, Bash scripting

Software Application Engineer Intern

Valeo Cairo | Jul 2022 - Sep 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 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 remote server 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.

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, Raspi-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.

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

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
CGPA: 3.96

Award: Full scholarship at Nile University

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

LANGUAGES

Arabic (Native)

English (Professional)

For website version visit:
https://hossamhamzahm.github.io