

# 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 schemas and migrations
  - Designed RESTful API with authentication & authorization
  - Dockerized the application & 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**
  - 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) 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 – 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++, 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

**Web Technologies**  
HTML, CSS, JS, Bootstrap, Node.js, Express, TypeScript, React, Spring Boot, Mongo, SQL, Docker, Postman

**Version Control**  
Git/GitHub

## AWARDS & ACHIEVEMENTS

- Qualified to ACPC (Africa and Arab Collegiate Programming Championship)  
2024 - To be held this year  
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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