



MOSTAFA GAAFAR

+201501892575,+447405942783 ✉ mostafamostafa21314@gmail.com  [linkedin.com/in/mostafa-gaafar-001979237](https://www.linkedin.com/in/mostafa-gaafar-001979237)
 github.com/mostafa21314

Education

American University in Cairo (AUC)

BSc Computer Engineering and Mathematics (Double Major) — GPA: 3.939, MGPA: 4.0

Feb 2022- Jul 2026

Cairo, Egypt

University of Edinburgh (Exchange Semester)

BSc Computer Science

Sep 2024 – Jan 2025

Edinburgh, UK

Experience

Kaf Insurance

Full stack Software Engineer, Part time (Python)

Jan 2025 – Present

Cairo, Egypt

- Automated key insurance processes, including an email notification system that logs and tracks system changes on django, eliminating manual logging and improving policy approval time by 15%.
- Resolved deployment and synchronization issues with migrations on docker with the DevOps team, ensuring smooth CI/CD workflows

Afritec Summer School on AI

Trainee (Python, Embedded C)

Jul 2024 – Sep 2024

New Cairo, Egypt

- Completed an intensive 4-week AI program, gaining expertise in machine learning algorithms and AI applications.
- Created a neural network model for gender/emotion classification (95%+ accuracy) and optimized a cat/dog detector (89% accuracy) using deep learning techniques.
- Simulated an automated factory line on TinkerCad, refining real-world manufacturing workflows through digital prototyping.

Student Union Web Dev Team

Developer (JavaScript, React, Node.js)

Sep 2023 – Present

New Cairo, Egypt

- Revamping web architecture using React and Node.js to optimize navigation and enhance user engagement.
- Built an interactive course notes library supporting 130+ courses, improving resource accessibility for undergraduates.

Projects

Pipelined RV32I Processor | Verilog

Sep 2024 – Nov 2024

- Optimized an existing RISC-V processor by implementing a 5-stage pipeline, reducing execution time by 25%.
- Implemented a branch prediction mechanism that enhanced processing efficiency and reduced instruction stalls.

RV32IC Simulator | C++

Feb 2024 – Jun 2024

- Developed an RV32IC reverse instruction set simulator handling 96 instruction types and generating detailed execution logs.

Logic Circuits Simulator | C++

Feb 2024 – Jun 2024

- Programmed a fully functional logic circuit simulator supporting 7 standard gates and custom gate types, handling wiring errors with real-time debugging features.

Snake and Ladder Game | Qt, C++

Sep 2023 – Dec 2023

- Developed a multi-player Snakes and Ladders game with dynamic board configurations and adjustable difficulty levels.

Leadership / Extracurricular

Peer Tutoring Centre

Peer Tutor

Sep 2022 – Sep 2024

New Cairo, Egypt

- Mentored 50+ students in CS1, CS2, and advanced mathematics, boosting academic performance through personalized tutoring sessions.

ICPC Global

ECPC Contestant

Aug 2023, Aug 2024

Alexandria, Egypt

- Ranked 3rd (AUC teams), 10th (Egypt, 2023); Ranked 4th (AUC teams, 2024).

CSCE Department

Teaching Assistant

Feb 2023 – May 2023

New Cairo, Egypt

- Assisted 40+ students during office hours and debugging programming assignments.
- Designed and supervised 5 quizzes for the class, ensuring assessment integrity.

CSCE Association

Academics Head

Sep 2023 – Jul 2024

New Cairo, Egypt

- Led 4+ technical workshops in Cybersecurity, GitHub, Databases, and Competitive Programming, training 100+ students through hands-on exercises.

Technical Skills

Languages: C++, Python, JavaScript, Java, SQL, Verilog, OCaml, CSS, HTML, Rust, Swift, Ruby, php, TypeScript, MatLab

Technologies/Frameworks: Django, React, PostgreSQL, MongoDB, Docker, TensorFlow, Keras, Pandas, Seaborn, Git, Qt, Node.js, Arduino

Other: Agile, CI/CD, REST APIs, SDK integration