

## EDUCATION

**Alexandria University** | BSc. in Electronics and Communications Engineering Oct 2020 — Jun 2025

- Relevant Coursework: Operating Systems, Data Structures, Introduction to Logic Circuits and Programming, Embedded Systems, Computers and Programming, Microprocessors, Probability, Computational Mathematics, Project Management, Entrepreneurship

## WORK EXPERIENCE

**Back-End Developer Intern** | Make Your Miracle - MYM Sep 2023 — Dec 2023

- Contributed to the backend development team using Node.js to build and maintain **web applications**.

**Programming and Robotics Instructor** | Gad Foundation Jul 2023 — Aug 2023

- Designed and delivered comprehensive Scratch and **Python programming courses** for students aged 6-12 years, while also instructing them on the fundamentals of **circuit design**, and **breadboarding**.
- Enabled students to foster a deeper understanding of **electronics** and **robotics** by facilitating interactive and hands-on learning experiences. Students successfully created a variety of projects using Scratch and **Python**.
- Monitored and assessed student progress, providing constructive feedback to enhance their **coding** and **robotics** skills.

## PROJECTS

**Pintos** | [https://github.com/salmahamdy/pintos\\_phase1\\_threads](https://github.com/salmahamdy/pintos_phase1_threads) Apr 2024

- Developed a **multi-threaded operating system kernel** using the **C programming language** as part of the Pintos project, an educational endeavor to understand the fundamentals of operating systems.
- Designed and implemented the alarming subsystem, ensuring proper scheduling and handling of system alarms to meet project specifications and pass all test cases.

**ECE-FOE** | <https://mennatallah9.github.io/ECE-FOE/> Jun 2023

- Created a **responsive front-end web application** for over **200** students in the Electronics and Communications Engineering Department at the Faculty of Engineering, Alexandria University. The application provided easy access to essential links, cheatsheets, YouTube playlists, GPA calculator, and graduation project resources.
- Incorporated **Dark and Light Modes** for enhanced user experience and customization options, catering to the diverse preferences of the student community.
- Obtained a **94.75** score on **Lighthouse** (**100%** Performance, **98%** Accessibility, **92%** Best Practices, **89%** SEO).

**ChatNow** | <https://github.com/Mennatallah9/ChatNow> Apr 2023

- Developed a real-time chat website using **HTML**, **CSS**, **JavaScript**, **Node.js**, and **Express.js**.
- Implemented 6 different chat rooms, allowing seamless switching between different chat rooms. Users can easily see who's active in each room with the dynamic display of online users
- Developed a **server-side** code to handle incoming messages and broadcast them to all users in the same chat room in real-time using **Socket.io**.

## EXTRACURRICULAR ACTIVITIES

- Volunteered in the **Software Subteam (Back-End Web Development Department)** of **IEEE SSCS ALEX SC**, worked on developing APIs using MongoDB, Express and Node.js .
- Successfully accomplished the **Lyft Back-End Engineering Virtual Experience Program** and completed tasks in **software architecture**, **refactoring**, **unit testing**, and **test-driven development**.
- Solved **300+** problems with **Python** on leetcode and hackerrank.

## TECHNICAL SKILLS

Languages	Python, C++, C, JavaScript, MATLAB, HTML, CSS, Java, x86 Assembly
Libraries, Tools & Frameworks	Git, Unix/Linux, Docker, Postman, MySQL, PostgreSQL, MongoDB, Node.js, Express.js
Concepts & Paradigms	Data Analysis, Machine Learning, Algorithms, Data Structures, Back-End Web Development, OOP, Design Patterns
Spoken and Written Languages	Arabic (native), English (C1), French (B1)

## AWARDS & HONORS

- 2021** Ranked one of the **top 5%** of students in the preparatory year in university with a CGPA of 3.54.
- 2020** Ranked the **second student** in high school (Mathematics section) with a grade of 97.9%.