

# Hassan Sherif Mikawi

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## EDUCATION

### Arab Academy for Science, Technology and Maritime Transport (AAST)

*B.Sc. in Electrical and Computer Engineering; GPA: 3.3/4.00*

Cairo, Egypt

*Oct 2020 – July 2025*

### ALX Software Engineering

*Comprehensive full stack development course*

Cairo, Egypt

*Apr 2023 – May 2024*

## RELEVANT COURSEWORK & CERTIFICATIONS

**Embedded Systems (AVR) Course at IMT School:** Completed hands-on AVR microcontroller programming and embedded systems fundamentals.

**Networking & Cyber Security Internship at SEE Company:** Learned cyber security concepts and CCNA fundamentals through practical training.

**Flutter Development Course on Udemy:** Built multiple projects: "Acade" game (XO, Hangman, Number Prediction), Quran app, and a full-stack ecommerce app with Google Auth, seller dashboard, and self-hosted database.

**Software Engineering Course at ALX:** Covered software engineering principles, full-stack development, and project management.

## EXPERIENCE

### Intern at Arab Organization for Industrialization (AOI)

*Contributed to the manufacturing line for hardware components.*

*Jun 2023 – July 2023*

- Assisted in the optimization of the hardware assembly line, implementing lean manufacturing principles to increase efficiency and reduce waste.
- Collaborated with engineering teams to refine design specifications and ensure compliance with industry standards.

### Software Engineer Intern at Al-Ahram Establishment

*Internship*

Cairo, Egypt

*Sep 2024 – Dec 2024*

- Developed Python scripts to automate data retrieval from Microsoft SQL Server, streamlining processes for senior developers.
- Built a fully functional agricultural website from the ground up, handling both front-end and back-end development.
- Implemented security measures to mitigate potential attacks and managed site deployment on local servers.
- Optimized performance and traffic handling, ensuring stable and efficient operations.

## PROJECTS

### Flex Programming Language (Graduation Project)

*Python, JavaScript, React, VS Code Extension*

*Jan 2024 – Apr 2025*

- Developed in Python and Franco-Arab (Arabic transliteration) syntax
- Integrated an AI model for error correction that explains each error directly in the terminal
- Designed and implemented an innovative programming language that seamlessly blends multiple syntax styles (English, Arabic transliteration, and C-style) to accommodate diverse programming preferences
- Developed a robust interpreter with lexical analyzer, recursive descent parser, and comprehensive error handling including AI-assisted debugging
- Created a feature-rich online IDE with real-time input handling and code execution capabilities
- Built two VSCode extensions: one for language support and another with an integrated chatbot to facilitate learning for students
- Implemented cross-platform compatibility with executable builds for Windows, macOS, and Linux
- Designed a smart import system supporting modular code organization and library management

### Hyper Market Management System

*Java, MySQL, NetBeans, jBCrypt, FlatLaf*

*Jun 2023*

- Revolutionized market management with a comprehensive system for sales, purchases, and employee roles.
- Implemented administrative, marketing, inventory management, sales, and user modules.
- Used Java for backend development, NetBeans for GUI, and MySQL for the database.
- Enhanced security with password management using jBCrypt and improved design using FlatLaf.
- Packaged for easy installation using jpackage with an executable installer available in the releases.

### Simple Shell

*C, Unix System Calls, GCC, Betty Coding Style*

*Dec 2023*

- Developed a UNIX command line interpreter as a group project, emulating basic shell functionalities.
- Implemented functionalities including command execution, environment manipulation, and custom input handling
- Incorporated system-level programming with Unix system calls like fork, execve, and waitpid to manage processes.
- Utilized C for core development with strict adherence to the Betty coding style for clean and maintainable code.

## SKILLS

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**Languages:** C/C++, C#, Java, Python, JavaScript, Bash, SQL, Flutter

**Operating Systems:** Windows, linux, MacOS

**Developer Tools:** Git, SSH, Linux, VS Code, Visual Studio, Docker, Servers{linux , macos , windows Servers}

**Methodologies:** Agile, Scrum, OOP, Functional Programming, DevOps, CI/CD, TDD

## EXTRACURRICULAR ACTIVITIES

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**ASI - AI Club (Head of Learning)**

(AASST)

*Responsible for designing and implementing the curriculum and organizing AI-focused tournaments.*

*Jan 2024*