Hassan Sherif Mikawi

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EDUCATION

Arab Academy for Science, Technology and Maritime Transport (AAST) — Cairo, Egypt
B.Sc. in Electrical and Computer Engineering; **GPA: 3.3/4.00** — *Oct 2020 – July 2025*

ALX Software Engineering — Cairo, Egypt
Comprehensive full stack development course — *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 — Cairo, Egypt
Internship — *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 API — Jan 2024 – Apr 2025
- 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

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

ASI - AI Club (Head of Learning) *(AAST) Jan 2024*

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