

# Hassan Sherif Mikawi

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## EDUCATION

<b>Arab Academy for Science, Technology and Maritime Transport (AAST)</b> <i>B.Sc. in Electrical and Computer Engineering; GPA: 3.3/4.00</i>	Cairo, Egypt Oct 2020 – July 2025
<b>ALX Software Engineering</b> <i>Comprehensive full stack development course</i>	Cairo, Egypt Apr 2023 – May 2024

## EXPERIENCE

<b>Intern at Arab Organization for Industrialization (AOI)</b> <i>Contributed to the manufacturing line for hardware components.</i>	Jun 2023 – July 2023
<ul style="list-style-type: none"><li>Assisted in the optimization of the hardware assembly line, implementing lean manufacturing principles to increase efficiency and reduce waste.</li><li>Collaborated with engineering teams to refine design specifications and ensure compliance with industry standards.</li></ul>	
<b>Software Engineer Intern at Al-Ahram Establishment</b> <i>Internship</i>	Cairo, Egypt Sep 2024 – Dec 2024
<ul style="list-style-type: none"><li>Developed Python scripts to automate data retrieval from Microsoft SQL Server, streamlining processes for senior developers.</li><li>Built a fully functional agricultural website from the ground up, handling both front-end and back-end development.</li><li>Implemented security measures to mitigate potential attacks and managed site deployment on local servers.</li><li>Optimized performance and traffic handling, ensuring stable and efficient operations.</li></ul>	

## PROJECTS

<b>Flex Programming Language</b>   Python, JavaScript, React, VS Code Extension API	Jan 2023 – Apr 2024
<ul style="list-style-type: none"><li>Designed and implemented an innovative programming language that seamlessly blends multiple syntax styles (English, Arabic transliteration, and C-style) to accommodate diverse programming preferences</li><li>Developed a robust interpreter with lexical analyzer, recursive descent parser, and comprehensive error handling including AI-assisted debugging</li><li>Created a feature-rich online IDE with real-time input handling and code execution capabilities</li><li>Built two VSCode extensions: one for language support and another with an integrated chatbot to facilitate learning for students</li><li>Implemented cross-platform compatibility with executable builds for Windows, macOS, and Linux</li><li>Designed a smart import system supporting modular code organization and library management</li></ul>	
<b>Advanced Home Server Setup (for Personal Use)</b>   Docker, Homarr, Plex, Nginx, VPN	Feb 2024
<ul style="list-style-type: none"><li>Engineered an extensive home lab setup using Docker to deploy and manage a wide array of services such as media servers (Plex, Jellyfin), download clients (<b>Transmission</b>), and content managers (<b>Radarr</b>, <b>Sonarr</b>, <b>Prowlarr</b>)</li><li>Employed Tautulli and Kasm for detailed monitoring and secure, isolated browsing environments respectively, optimizing both user experience and operational security.</li><li>Set up Mealie for meal planning and Teslamate for data monitoring, demonstrating versatility in server utility beyond traditional media and file storage roles.</li><li>Reinforced network security with VPN integrations, safeguarding all data transmissions especially in privacy-sensitive applications like torrenting and external media access.</li></ul>	
<b>Hyper Market Management System</b>   Java, MySQL, NetBeans, jBCrypt, FlatLaf	Jun 2023
<ul style="list-style-type: none"><li>Revolutionized market management with a comprehensive system for sales, purchases, and employee roles.</li><li>Implemented administrative, marketing, inventory management, sales, and user modules.</li><li>Used Java for backend development, NetBeans for GUI, and MySQL for the database.</li><li>Enhanced security with password management using jBCrypt and improved design using FlatLaf.</li><li>Packaged for easy installation using jpackage with an executable installer available in the releases.</li></ul>	
<b>Simple Shell</b>   C, Unix System Calls, GCC, Betty Coding Style	Dec 2023
<ul style="list-style-type: none"><li>Developed a UNIX command line interpreter as a group project, emulating basic shell functionalities.</li><li>Implemented functionalities including command execution, environment manipulation, and custom input handling</li><li>Incorporated system-level programming with Unix system calls like fork, execve, and waitpid to manage processes.</li><li>Utilized C for core development with strict adherence to the Betty coding style for clean and maintainable code.</li></ul>	

## 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)**

*(AAST) Jan 2024*

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