

# Hamza Elkababji

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## EDUCATION

### The University Of Western Ontario

Sep. 2022 – May 2026

*Bachelor of Engineering Science in Software Engineering*

*London, ON*

**Relevant Courses:** Data Structures and Algorithms, Software Design, Software Construction, Scripting Language, Database Management Systems, Software Project Management, Networking, Probability and Statistics, Linear Algebra

**Extracurricular:** Engineering Student **Ambassador** 2023 - 2024, Overhaul **Hackathon**, Western Engineering **Competition**, Dean's Honour List 2022 - 2023, The Western Scholarship of Distinction

## SKILLS

**Languages:** Java, Python, C#, C, C++, SQL (Derby/JDBC, MySQL, and NoSQL), YAML

**Libraries & Frameworks:** Pandas & NumPy, Flask, JavaFX, .NET, Node.js, Angular

**DevOps Tools:** SSH, Microsoft Azure CI/CD, AWS (Amazon Web Services), WSL (Windows Subsystem for Linux)

**Other:** Agile Methodologies, OpenGL, FPGA Board, Verilog, Arduino, Raspberry Pi 3/4

## EXPERIENCE

### IoT Integrator

May 2024 – Sep 2024

*Smartegrators Ltd.*

*London, ON*

- **Engineered 9 Python** automation scripts and config files to successfully **integrate 75+ IoT** devices resulting in streamlined device communication within **open source** apps.
- **Optimized** day-to-day operations for **20+** clients by designing and implementing **fully automated** home systems and secure commercial building solutions, enhancing efficiency, convenience, and security.
- Led the deployment of **10+ automation** systems while collaborating within a **cross-functional team** of 5 engineers, providing clear communication across disciplines and ensuring the successful integration of IoT systems.
- **Developed and hosted** a static web app to showcase Smartegrators' services in IoT, AI, and Smart Homes, improving client engagement and providing a centralized platform for service information.

### Technology Representative

April 2023 – Sep 2023

*Staples*

*London, ON*

- **Collaborated** with a team of **20** sales and support staff to ensure seamless customer experiences, from selecting the right tech devices to **troubleshooting** post-purchase issues.
- Exceeded sales targets by **130%** through effectively selling Easy Care and Tech Service plans, reducing customer stress and enhancing satisfaction, while demonstrating **problem-solving** and customer-first thinking.

## PROJECTS

### Media Converter And Organizer | *Python, Tkinter, PyInstaller, MS Partner, Git*

[bit.ly/MS-Store-Page](https://bit.ly/MS-Store-Page)

- Developed a **full-stack .exe** application using PyInstaller to convert and organize .HEIC and .MOV files, providing a **solution** for Windows users to access these formats, improving file management and accessibility.
- Converted 7.5k+ and organized 16k+ media files into folders based on year and month as part of the **testing** phase of the **Agile** methodology, providing efficient file management and **system reliability** for the deployment.
- Improved processing speeds by **80%** from the initial release using **multithreading** during a subsequent **sprint**.
- Packaged & **published** the app on the **Microsoft Store** to make it accessible to everyone, while open-sourcing it.

### Employee Payroll Application | *Java, JavaFX, SQL(Apache Derby), Maven*

[bit.ly/Employee-App](https://bit.ly/Employee-App)

- Developed a **full-stack** employee payroll application clone using **JavaFX** and **SQL (Apache Derby)**, allowing admins to manage user accounts, employee information, and payroll data.
- Implemented login functionality for admin and user roles, enabling **access control** for sensitive information.
- Designed admin features to add, update, and store detailed employee data, including salaries and personal information, simplifying payroll data management and reducing manual errors.
- Built a user interface using **JavaFX**, allowing employees to view compensation and manage sick/vacation days.

### "Cast Away" Video Game | *C#, Unity, OpenGL, DirectX 11, UML Diagrams, Git*

[bit.ly/Cast-Away-Game](https://bit.ly/Cast-Away-Game)

- Developed a Role Playing Game with the **Unity** game engine and **C#** by utilizing DirectX 11 and OpenGL.
- Collaborated on an **inventory/stats system** to track the player's **40+** challenges, items, and encounters.
- Included interaction **logic** with a health & aggression bar so the user may choose the passive or aggressive path.
- Documented the development process with **UML diagrams** such as sequence, class, and use case diagrams.