

Ghanem Ghanem

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SKILLS

- **Programming Languages:** Python, C, C++, Java, HTML/CSS, JavaScript, Bash.
- **Frameworks:** Django, Flask, Sanic, Spring Boot, Android Studio, GTK4, Qt.
- **Software Tools/Other:** Git, Gitlab, MySQL, Docker, AWS, VIM, REST APIs, Linux, JSON, CURL, Jira.

EDUCATION

University of Windsor (Sept 2019 - August 2023)

Windsor, Canada

Bachelor of Science Honours Computer Science with Software Engineering Co-op (Minor in Mathematics)

- Graduated with distinction
- Deans List 2020-2023

EXPERIENCE

Software Developer

Waterloo, ON

Clearpath Robotics

Jan 2022 - Sept 2022

- Coordinated with a team of developers on biweekly sprints to develop our next-generation builds, based on the functional package manager **Nix**.
- Developed a web server utilizing the **Sanic** asynchronous web framework in **Python** (akin to **Flask**), complemented by integration of **HTML**, **CSS**, and **JavaScript** for the front-end.
- Webserver was used to present comprehensive logs and data associated with ROS/C++ packages. This helped senior engineers in identifying issues within their **ROS** or **C++** packages, significantly expediting the troubleshooting process, enhancing the overall efficiency of the team.
- Implemented **Gitlab CI** pipelines for end-to-end testing making sure all endpoints were working.
- Implemented a **Docker** image and **Bash** Script that would create a minimal container for aws-fleet accounts to deploy robot simulations.

Web Developer

Windsor, ON

University of Windsor

May 2021 - Sept 2021

- Developed and published Ebooks using Pressbooks. Customizing the site using **HTML**, **CSS** and **JavaScript**.
- Published a site for students using WordPress, with a combination of **HTML**, **CSS** and **JavaScript** to change the design of the site. Site was used to upload Ebooks and OERs for students.

Teaching Assistant

Windsor, ON

University of Windsor

Sept 2021 - Sept 2023

- Teaching students advanced programming skills such as event-driven programming, advanced GUI design and concurrent programming techniques
- Effectively communicate with professors and fellow assistants to give students the best learning experience.

PROJECTS

Python blockchain PHR system

[Github link](#)

- Created a blockchain using **Python** and **Flask** for a PHR system (Personal health record). The blockchain stores a person's name, date of birth, medical history, and their family doctor's name.
- **Flask**, **Javascript**, **HTML** and **CSS** was used to create a PHR system for users to input data. Patient data is encrypted using the **cryptogrphy** library. Data is encrypted with a public key and can be accessed using a private key.

Multi-threaded C Video decoder

[Github link](#)

- Developed a multi-threaded video and audio decoder leveraging **C**, **FFmpeg**, **PulseAudio Simple API**, and **GTK4**.
- Developed a decoder using **pthreads**, incorporating mutex locks for seamless operation. Employed **GTK4** to display video output and integrated **PulseAudio Simple API** for effective synchronization of device audio and video decoding.