Huzayfa Jasat

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Education

University Of Waterloo Expected Graduation: April 2029

Bachelor of Applied Science in Mechatronics Engineering — Academic Representative *Waterloo, ON*

Experience

Backend Software Engineer May 2025 – Aug. 2025

Levanta Labs Software Agency

- Built and maintained **RESTful APIs** using **Node.js**, **Express.js**, and **PostgreSQL**, powering backend services for **7+ startup**s, **reducing request latency by 25%**, and improving endpoint scalability across multiple clients
- Implemented email and payment flows using **Knex.js, Redis, Stripe, and Resend**, increasing system reliability, **reducing auth and billing issues by 30%**, and supporting seamless onboarding for high-growth startup clients
- Automated data workflows using **Python** and external APIs for web scraping, deployed **Bash** scripts via **AWS**, and containerized services with **Docker**, streamlining workflows and **boosting task efficiency by 35%**
- Developed and merged **75+ backend endpoints** across projects, integrating authentication flows such as 2FA, magic link, and email re-verification, and collaborating through frequent PR reviews and feedback cycles

Software Engineer Jan. 2025 – Present

WATonomous

- Developed control methods and motor coordination strategies for humanoid robots to improve movement
- Improved real-time sensor-to-motor data transfer using ROS and Docker, enhancing responsiveness
- Analyzed and debugged controller communication (CAN bus) to ensure reliable sensor-actuator coordination

Software Engineer Sep. 2024 – Present

University of Waterloo Formula Electric

- Developed a **C++** CLI command to clear motor controller faults via **CAN**, reducing troubleshooting time by **30%**
- Designed and deployed fault-clear functionality in EV motor diagnostics to automate fault recovery, achieving a **95% success rate** in **HIL simulations** and **slashing manual debugging time by 40%**
- Refined PID control loops to address motor inefficiencies, **boosting motor efficiency by 10%**
- Debugged STM32 microcontroller firmware during vehicle tests, enhancing motor response accuracy and reliability

Projects

NearU | *React, Typescript, Firebase* May 2025

- Launched a **Progressive Web App (PWA)** for University of Waterloo students, enabling users to see and connect with others within a 500-meter radius, enhancing campus social networking
- Implemented real-time location tracking and instant messaging using **React** with **TypeScript** and **Firebase**, ensuring fast, reliable communication and seamless user experience
- Grew user base to nearly **200 sign-ups**, demonstrating strong adoption and engagement within the community

PushBlock (1st Place at GenAI Genesis) | *HTML, CSS, JavaScript, Flask, OpenCV, MediaPipe* Mar. 2025

- Built a Chrome extension using **HTML, CSS, and JavaScript** that blocks distracting websites, winning **1st place in Best Healthcare Hack** and **2nd Overall** among **150+ submissions** at **GenAI Genesis**
- Created a pushup detection system using **OpenCV** and **MediaPipe**, achieving **95% accuracy** and enforcing exercise completion before unlocking restricted sites, enhancing user engagement and compliance
- Integrated a **Flask backend** with the **JavaScript frontend**, **reducing page load latency by 40%**

AI-Powered Code Optimizer| *Python, Matplotlib, Streamlit, Gemini AI,* Jan. 2025

- Developed an AI-driven code optimization tool using **Python** and **Streamlit**, enabling an interactive UI that automates performance analysis and **cut manual debugging effort by 60%** through visual feedback
- Leveraged the **Google Gemini API** to optimize code execution, **reducing average execution time by 82%** and **improving memory usage by up to 40%**, while maintaining functionality across **100+ test cases**
- Engineered a visualization dashboard using **Matplotlib**, generating dynamic performance graphs that provide instant feedback on execution time and memory usage, accelerating optimization insights by **3x**

Skills

Programming Languages: Python, Java, C, C++, TypeScript, JavaScript, HTML/CSS, ROS

Tools and Frameworks: React, Flask, Matplotlib, PostgreSQL, MySQL, Redis, AWS, Firebase, Git, Docker