




WILLIAM WU

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EDUCATION

University of Waterloo

Sep 2024 – Present

Bachelor of Computer Science, Honours.

Waterloo, ON

- Cumulative **3.97 GPA (91.8%)** and one of ten **Mathematics National Scholarship recipients (\$15,000)**

TECHNICAL SKILLS

Languages: Python, Java, C, C++, JavaScript, TypeScript, SQL, HTML, CSS, Bash, R, Racket

Frameworks: Flask, Express, FastAPI, React, Next.js, TailwindCSS, Streamlit

Tools & Technologies: Node.js, Git, AWS, Docker, Linux, PostgreSQL, Pandas, Matplotlib, OpenAI

EXPERIENCE

Software Engineer Intern | Javascript, Typescript, Node.js, Express

May 2025 – Present

LeapAP Inc.

Aurora, Ontario

- Built new **web scraping** solutions with **Puppeteer**, improving document collection reliability and coverage
- Constructed **regex**-based parsers with **95%+ accuracy** in extracting critical data from unstructured documents
- Leveraged **Grafana and Graylog** to monitor and resolve scraping anomalies, ensuring **under 2.5% error** rates
- Accelerated development for **15+ scrapers** by introducing reusability and refactoring the scraping framework

Autonomous Software Developer | C++, Python, ROS 2, Docker, XML

Feb 2025 – Present

WATonomous

Waterloo, Ontario

- Implemented a **planner node** for a robotics simulation, utilizing the **A* algorithm** to process costmap data
- Integrated a **YOLOv8 model** into a Mars rover and **fine-tuned** it for prop detection using Realsense cameras
- Designed and incorporated realistic terrain and props in a Mars rover **Gazebo** simulation using **mesh assets**

Contest Organizer | C++, Java, Python, LaTeX

May 2021 – Feb 2023

DMOJ Modern Online Judge

- Applied **advanced algorithms and data-structures** to curate **9 contests**, with a total of **1,500+ live participants**
- Authored **12 competitive programming problems** with a combined total of **13,000+ user submission attempts**
- Engineered black-box test cases for **15+ rated programming contests**, preventing unintended solutions

PROJECTS


Re-Prompt-That: Multiplayer AI Prompting Game | Javascript, Next.js, Node.js, Socket.io

- Crafted a cross-platform multiplayer experience by integrating a **websocket server** with an intuitive frontend
- Optimized event logic, reducing game start **latency to under 50 ms** and enabling tight synchronization for users

Layoff Evaders: VR Fitness Game Companion App | Python, Firebase, Pandas, Streamlit, Cohere

- Achieved **2nd place overall** out of **600+ competitors** and **130+ submitted projects** during DeltaHacks XI
- Developed a real-time session statistics dashboard using **Firebase and Cohere's LLM** to enhance interactivity

AdmissEd: Admission Statistics Web App | AWS, React, Python, FastAPI, Pandas, Matplotlib

- Deployed admissEd.com  by employing AWS cloud technologies such as **S3, Lambda and the CloudFront CDN**
- Built a responsive full-stack web app utilizing React, featuring a **RESTful FastAPI backend** for data parsing
- Harnessed the **Pandas and Matplotlib** data analysis and visualization libraries to generate in-depth reports

LemonAid: AI Pantry Monitor | Python, Flask, OpenAI API, JSON

- Implemented grocery photo scanning and expiration date processing using **OpenAI's** vision capabilities
- Employed **GPT-4o text generation and DALL-E** to create step-by-step recipes from given pantry ingredients

Eyedentify: Facial Recognition Attendance Tracker | Python, Flask, Face Recognition, JSON

- Won **2nd place overall and the best web app** prize category out of **350+ competitors** during YRHacks 2023
- Engineered a seamless Flask-based web app to automate class attendance using the **face-recognition** library

ACHIEVEMENTS & CERTIFICATIONS

AWS Certified Cloud Practitioner | *Certification* - Knowledge of core **cloud computing** concepts

Aug 2025

Canadian Computing Competition, Senior | *Honour Roll* - Placed **75th out of 3,262 nationally**

Feb 2022

USA Computing Olympiad | *Platinum Division* - Promoted by scoring **746/1,000** on the Gold Contest

Dec 2022