WILLIAM WU

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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

EDUCATION

University of Waterloo   Waterloo, ON
Bachelor of Computer Science, Honours.   *Sep 2024 – Present*
- Cumulative **3.97 GPA (91.8%)** and one of ten **Mathematics National Scholarship recipients ($15,000)**

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*   Jul 2025
- 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

AdmissEd: Admission Statistics Web App | *AWS, React, Python, FastAPI, Pandas, Matplotlib*   Dec 2024
- 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*   Aug 2024
- 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*   Mar 2023
- 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