William Wu

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TECHNICAL SKILLS

Languages: Python, Java, C, C++, JavaScript, TypeScript, SQL, HTML, CSS, Bash, R, Racket
Frameworks: Flask, FastAPI, React, Next.js, TailwindCSS, Streamlit
Tools and Technologies: Node.js, Git, AWS, Linux, PostgreSQL, Pandas, Matplotlib, OpenAI

EDUCATION

University of Waterloo   Waterloo, ON
Honours Bachelor of Computer Science, Co-op   *Sep 2024 – May 2029*
- Cumulative 4.0 GPA (91.8%)
- Recipient of the Mathematics National Scholarship, one of 10 awarded in the Faculty of Mathematics

EXPERIENCE

Software Developer Co-op   May 2025 - Present
LeapAP Inc.   *Aurora, Ontario*
- Constructed regex-based parsers to extract critical data from unstructured documents, achieving 95%+ accuracy
- Built new scraping solutions with Node.js Puppeteer, improving document collection reliability and coverage
- Used Grafana dashboards to monitor scraping anomalies and leveraged Graylog to diagnose and resolve the issues
- Refactored the internal scraping framework and introduced a reusable base scraper to streamline development

Autonomous Software Developer   Jan 2025 - Present
WATonomous   *Waterloo, Ontario*
- Implemented a planner node in C++ using ROS 2 for a robotics simulation, utilizing the A* algorithm to process ingested cost map data and generate navigation waypoints
- Researched and designed a Mars simulation environment using mesh assets, enabling realistic terrain interactions

DMOJ Modern Online Judge   May 2021 – Present
- Moderated the site as staff in training, performing integrity checks on user in-contest submissions
- Applied advanced algorithms and data-structures to curate 9 contests, attracting a total of 1500+ live participants
- Authored 12 competitive programming problems with a combined total of 13000+ solve attempts by users
- Tested data strength and provided feedback for rated programming contests to prevent unintended solutions

PROJECTS

Layoff Evaders | VR Fitness Game Companion App | *Python, Pandas, Streamlit, Cohere API*   Jan 2025
- Won 2nd place overall out of 600+ competitors and 130+ submitted projects in DeltaHacks XI
- Developed a fitness-oriented VR game with a real-time companion dashboard displaying session statistics
- Leveraged Streamlit and Cohere's LLM to implement a chatbot with interactive chart generation capabilities

AdmissEd | Admission Statistics Web App | *AWS, React, Python, FastAPI, Pandas, Matplotlib*   Dec 2024
- Deployed *admissed.com* ↗ by employing AWS technologies such as S3, CloudFront, Route 53, ECR and Lambda
- Built a full-stack web app for admission statistics analysis, featuring a responsive UI built with React and CSS
- Utilized Python's FastAPI web framework to form a RESTful API supporting data parsing and manipulation
- Harnessed the Pandas and Matplotlib data analysis and visualization libraries to generate comprehensive reports

LemonAid | AI Pantry Monitor | *Python, Flask, OpenAI API, JSON*   Aug 2024
- Developed an AI-powered pantry web app emphasizing optimal user efficiency for Ignition Hacks 2024
- Implemented grocery photo scanning and expiration date processing using OpenAI's vision capabilities
- Employed GPT-4 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 category out of 350+ competitors in YRHacks 2023
- Engineered an intuitive web app interface to optimize class attendance for teachers by using facial recognition
- Built a Flask backend application which utilized the Python face-recognition library to determine face similarities