

Tony (Wuyue) Sun

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EDUCATION

University of Waterloo, *Bachelor of Software Engineering (BSE)*

2020 – 2025

Candidate for Human-Computer Interaction Specialization

3.98 GPA | 2x Dean's Honours List | Mathematics Society of UWaterloo Representative (1A)

SKILLS

Languages: C++, Python, Java, JavaScript/TypeScript, C, SQL, C#, Golang

Tools/Technologies: Docker, AWS, Microsoft Azure, Flask, React.js, Jenkins, PySpark, Elasticsearch, Node.js, MySQL, Postman, Raspberry Pi, Jira, Valgrind, TensorFlow, Selenium, Git, Unix

EXPERIENCE

Huawei, *Software Developer Intern*

May 2023 – present

- Architected multi-platform web engine benchmarking tool with **Node.js**, **Appium**, **Redis** for use by 4+ internal teams
- Implemented **forward proxy caching** with **C**, increasing response speed for the WebView client by over **60%**

University of Waterloo, *Java Developer*

Jan 2023 – Apr 2023

- Contributed to the JSpecify [🔗](#) project under Prof. Werner Dietl to develop a unified type checker framework for **Java**

Intern Guys, *Front-end Developer Intern*

Jan 2023 – Feb 2023

- Constructed dashboard and job posting modals using **React.js**, supporting development for upcoming soft launch

Trend Micro, *Software Developer Intern*

Sep 2022 – Dec 2022

- Expanded monitoring coverage by 20%, implementing **driver** monitoring and blocking functionalities in **C++** and **Lua**
- Implemented path matching, wildcard and search algorithms to improve matching module **execution time by 30%** and optimized for compatibility with **20+ Unix and Windows-based operating systems**
- Identified and patched high-priority vulnerability allowing for malicious script execution in locked-down **Bash** shell

Ontario Digital Service, *Software Developer Intern*

Jan 2022 – Apr 2022

- Led majority (80%+) of development for microservices-based localizable web app on Ontario.ca with **Eleventy**, projected to reach **1.2 million** unique annual visitors [Public Sector Salary Disclosure [🔗](#)]
- Constructed an **ETL data pipeline** through **Azure Databricks** to process Ontario's largest production dataset using **PySpark** and deliver to **Elasticsearch** clusters, cutting manual processes by 90% and data ingestion time by 80%

WATOLINK, *Software Engineering Lead (ConSof Team)* [🔗](#)

Sep 2021 – Jul 2022

- Architected the desktop interface for a **SSVEP**-based brain controlled communication tool using **PyQt5** with **OpenGL**
- Practiced technical **project management** within team of 8 to enable efficient delivery cycles and exceed deadlines

PROJECTS

tldr, *Cal Hacks 9 Winner* [🔗](#)

Oct 2022

- Developed an article digest tool featuring a browser extension and website duo in **Preact** and **Flask**
- Tuned **natural language processing** models to provide core functionalities for sentiment analysis and text summary

JOHTnotes, *Hack the North 2021 Finalist* [🔗](#)

Oct 2021

- Built and deployed a full-stack web application allowing users to view imported videos with searchable transcripts and make notes at clickable timestamps using **React.js**, **Flask**, and **CockroachDB**

ITrash, *Self-Driving Autonomous Trash Can* [🔗](#)

Oct 2020 – Apr 2021

- Built a robotic trash can that detects thrown objects and repositions to catch them on **Raspberry Pi** and **Arduino**
- Implemented data transfer with **serial port communication** and **Python socket library**, reducing latency by 50%
- Utilized **OpenCV** to track projectile motion and successfully predict target landing position with 75% accuracy