Jeremy Mark Tubongbanua

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Education

Ontario Tech University Sep. 2021 – Apr. 2025
Bachelor of Engineering, Software Engineering (Honours) *Oshawa, ON*

- 3.92 cGPA (4.3 Scale)
- Relevant Coursework: Systems Programming, Computer Networks, Introduction to Artificial Intelligence, Operating Systems, Software Quality, Computer Security, Embedded Systems, Machine Learning and Data Mining

Experience

Software Engineer Aug. 2022 – Present
Atsign *San Francisco Bay Area, CA*

- Led development of C SDK, enabling secure **TCP/IP** sockets for embedded systems to communicate securely over the network eliminating all networking attack surfaces, written in **C**, **CMake** and **MbedTLS**
- Developed NoPorts C Daemon software, enabling common networking remote access protocols (like SSH/RDP) without the need to open any external ports on Linux system, written in **C** and **CMake**
- Represented Atsign at **CES 2024**, collaborating with engineers from the **The Qt Company** on a **Python** Raspberry Pi IoT demo, showcasing secure networking between **Linux** devices to 138,000+ conference attenders
- Developed regression tests and tooling for NoPorts product, simulating full end-to-end remote access between Linux containers using **Docker** and **UNIX Shell Scripting**
- Implemented **CI/CD** pipelines for core **Java** libraries automating regression tests and release to Sonatype Nexus Repository using **Maven** and **GitHub Actions**

Software Engineer Intern Jun. 2022 – Jul. 2022
Atsign *San Francisco Bay Area, CA*

- Developed Challenge-Response Authentication Mechanism (CRAM) and Create, Read, Update, and Delete (CRUD) operations in **Java** leveraging object-oriented principles and **Maven**
- Rebuilt developer documentation site with **HTML/CSS/JS**, establishing a standardized framework for technical writers to add and maintain developer documentation

Robotics Judge Advisor & Mentor Nov. 2021 – Present
FIRST Robotics Team 5596 *Scarborough, ON*

- Volunteer as the annual Judge Advisor for lego robotics competition events with over 1,500 attendees, coordinating 25+ adult judge volunteers and enforcing adherence to the official judging rules during team evaluations
- Programming mentor for Mary Ward FISRT Robotics Competition high school team, teaching Java and Robot programming and inspiring youth in STEM

Awards

1st Place Overall Apr. 2025
Electrical, Computer, and Software Engineering Capstone Exhibition *Ontario Tech University*

- Awarded 1st place out of 32 capstone project groups within the Electrical, Computer, and Software Engineering cohort of 2025 as the most technical, innovative and robust capstone project engineered over an 8 month duration
- Developed an indoor navigation system for the visually impaired with fully custom 3D-printed headset and smart cane attachment using **PyTorch** for object detection and classification and **AWS** for sign transcribing

3rd Place in Programming Jan. 2025
Ontario Engineering Competition 2025 *McMaster University*

- Awarded 3rd place in the province, representing Ontario Tech University competing against 13 engineering universities
- Developed disaster management application involving front-end/back-end integration and robust distributed systems solution using **Docker**, **Python Flask**, **React**, and **Tailwind CSS**

1st Place Overall Oct. 2024
NASA Space Apps Hackathon 2024 *Ontario Tech University*

- Awarded 1st place out of 12 teams and selected as global nominee to represent Ontario Tech on global stage
- Built a full-stack web application converting NASA Earthview data into 3D-printable STL meshes enabling qualitative inspection for Canadian Space Agency mission scientists, using **React**, **Tailwind CSS**, **Python Flask**, and **Linux**