

Jeremy Mark Tubongbanua

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EDUCATION

University of Ontario Institute of Technology

Sep. 2021 – Apr. 2025

Bachelor of Engineering, Software Engineering (cGPA: 3.93)

Ontario, Canada

- VP Communications for OTU Computer Science Club (Apr. 2023 – Apr. 2024), responsible for internal/external communications, sponsorship acquisition, assisting in organizing career-building workshops and events
- Relevant courses: Systems Programming, Software Design and Architecture, Data Management Systems, Design and Analysis of Algorithms, Computer Networks, Introduction to AI, Operating Systems, Software Quality, Software and Computer Security, Embedded Systems, and Machine Learning

WORK EXPERIENCE

Software Engineer

Jun. 2021 – Present

Atsign

San Jose, CA (Remote)

- Lead C developer overseeing the design, development, and maintenance of multiple SDKs used across Atsign products, ensuring secure IoT communication and edge encryption between networking devices used in real customer environments
- Represented Atsign at CES 2024 and Embedded World 2024, collaborating with the Qt Company to develop and showcase innovative IoT demos, including a smart IoT plant and an automated beverage dispenser
- Actively contribute to cross-functional team communication, providing technical support to marketing, assisting with intern mentorship and recruitment, and participating in daily stand-up meetings

VOLUNTEER EXPERIENCE

FIRST Robotics Judge Advisor and Mentor

Jun. 2020 – Jan. 2024

FRC 5596 Wolverines Team

Toronto, ON

- Volunteered as Regional Judge Advisor for the Mary Ward FIRST Lego League Qualifier and as Provincial Judge for Ontario West/East FIRST Lego League and FIRST Tech Challenge provincials, supervising up to 16 adult volunteers and judging elementary and high school robotics teams for two consecutive years
- Mentored grade 9-12 FRC students in Java Basics, Robotics programming, and WPI Lib Control fundamentals, leading weekly workshops over four months and providing guidance to up to 10 students

C++ North Volunteer

Jul. 2023

C++North

Toronto, ON

- Created and presented my own lightning talk on my experiences with carpal tunnel syndrome as a programmer with 50+ live attendees
- Volunteered in set up, tear down, and as a camera volunteer and time keeper for the full duration of the three-day long conference

PROJECTS

Atsign C SDK | C, CMake, IoT, Cryptography, Networking, Cross-Platform Development

Sep. 2024

- Lead developer of the C SDK, enabling secure IoT communication for devices in lower-level constrained environments
- Developed core AES-256 and RSA-2048 cryptographic implementations, end-to-end encryption, and atProtocol operations in C99 using MbedTLS, Espressif-IDF, and CMake
- Successfully used SDK as a core dependency for the NoPorts product, enabling remote access for lower-level operating systems like OpenWRT without exposing open port vulnerabilities

Qt/Atsign IoT Plant Demo | Python, Qt (Python), Fusion360, Linux, Robotics, 3D Printing

Jan. 2024

- Designed and developed a smart IoT plant with 4 sensors and 1 actuator that can be remotely and securely controlled using Atsign's secure networking technology and Qt's rich user interface
- Incorporated 3D printing techniques for designing plant enclosures and sensor holders using Fusion360
- Closely involved in joint partnership between Atsign and Qt, where project was selected to be displayed at CES 2024 in Las Vegas as a demo at the Qt Company's booth, showcased to 138k+ attendees