Simeon **Tran**

COMPUTER SCIENCE GRADUATE STUDENT

Santa Cruz, CA

⌂ simeonat.github.io | ⌗ SimeonAT | in simeon-tran

Education

University of California, Santa Cruz	*Santa Cruz, California*
M.S. IN COMPUTER SCIENCE AND ENGINEERING	*Sept. 2023 - PRESENT*

University of California, Santa Cruz	*Santa Cruz, California*
B.S. IN COMPUTER SCIENCE AND ENGINEERING	*July. 2019 - June. 2023*

Master's Thesis

OpenThread ASCON Fork for ESP32 Devices

HTTPS://GITHUB.COM/UCSC-THREADASCON   *Jan. 2024 - Present*

- Removed encryption algorithm used in OpenThread (AES) and replaced it with the ASCON encryption algorithms
- Forked and modified ESP-IDF source code to allow 802.15.4 compatible ESP32 devices to run my modified OpenThread ASCON fork

Experience

Tech4Good Lab   *Santa Cruz, California*

LEAD RESEARCH ASSISTANT   *Jun. 2023 - Dec. 2023*

- Oversaw the development of an Express.js and OpenAPI server that used ChatGPT to create personalized learning curriculums
- Helped team members write unit tests to help check the functionality of the backend server
- Conducted in-house research studies on explore how ChatGPT can be used to automate the creation of personalized learning pathways
- Developed the initial UI/UX flowchart for a web application used to design personalized learning experiences

Tech4Good Lab   *Santa Cruz, California*

WEB DEVELOPER TEAM LEAD   *Apr. 2023 - Jun. 2023*

- Used Ionic and Capacitor to create infrastructure to allow all existing Angular projects to run as iOS and Android apps
- Implemented Google OAuth login on iOS and Android using the Codetrix Capacitor Plugin
- Wrote detailed documentation and onboarding instructions for new members to get them acquainted with Ionic

Pharaoh Construction   *Los Angeles, California*

INFORMATION TECHNOLOGY INTERN   *Jun. 2022 - Sept. 2022*

- Responsible for day-to-day management of company's Synology NAS, including doing weekly backups and transferring important files onto server
- Managed Tailscale VPN that allows all employees to remotely access NAS and printers located in main office
- Used Docker to self-host Vaultwarden password manager on NAS in order to securely store employee passwords
- Used React and Node.js to develop a simple web application to allow employees to utilize Git version control without any knowledge of version control

Skills

Embedded Systems	ESP-IDF, OpenThread
Back-end	OpenAPI, GraphQL, PostgreSQL, Docker, Firebase
Front-end	React, Angular, HTML5, CSS
Programming	C/C++, Python, Typescript/Javascript, Haskell
Soft Skills	Tutoring, Mentoring

Teaching

UC Santa Cruz Learning Support Services *Remote*

Python Course Tutor *Sep. 2020 - Jun. 2021*

- Held weekly remote tutoring sessions with diverse students for Introduction to Python course
- Assisted students on various Python concepts and basic object-oriented programming, assisting them in performing well on their assignments and exams
- Demonstrated knowledge of Python by creating programming examples and activities

UC Santa Cruz Academic Excellence Program *Remote*

Precalculus Tutor *Oct. 2021 - Dec. 2021*

- Was a tutor/mentor for Professor Morales-Almazan's Precalculus class, under the recommendation of the professor himself
- Helped students with Precalculus topics that they struggled with, allowing them to be better prepared for the homework and exams
- Gave freshman students from different backgrounds advice on how to navigate the university, in addition to assisting them with math