Loc (Donovan) Tran

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Education

Georgia Institute of Technology, GA — **Degree Expected: June 2020**
Master of Science in Computer Science — GPA: 4.00/4.00

University of Washington Seattle, WA — **Graduated June 2020**
Bachelor of Science in Electrical Engineering — GPA: 3.62/4.00

Work Experience

Software Engineer (Full-time) — **Jan 2021 - Present**
Schweitzer Engineering Laboratories, Pullman WA

- Served as firmware lead for 5+ projects, architecting C/C++ solutions for embedded relays and automating build deployment with Jenkins, enhancing system reliability by 15% across 10 different SEL-4XX devices while reducing build time by 20%.
- Designed and optimized protection system logic on a VLIW processor using SHARC Assembly, cutting processing load by 10% and speeding response across all SEL4XX devices.
- Direct real-time power-system signal analysis using Omicron and SynchroWave, ensuring 90% issue resolution.

Electrical Engineering and Computer Science Tutor (Full-time) — **Sep 2020 - Dec 2020**
Varsity Tutors, Seattle WA

- Provided personalized tutoring to over 100 students across diverse programming skill levels in C/C++ and Java, improving average student performance by 20% on assessments.
- Taught weekly Python classes to 20 middle schoolers, improving concept mastery by 15%.
- Guided 2 engineering majors in embedded systems, with 80% finishing capstone projects early.

Software Engineer Intern (Full-time) — **June 2019 - August 2019**
Vascusight, Seattle WA

- Built a liver-blob detection algorithm for IVC 3D modeling from ultrasound, enhancing accuracy by 25% for 40 scans.
- Used MATLAB's graph-based segmentation, improving visualization by 35% and cutting processing time by 3 minutes/dataset.

Projects

Sympholingo | *React.js, Express.js, Vite, OpenAI, SunoAI*

- Hackathon winner project. Built an AI-powered language learning app that generates original songs in a user's target language based on their preferred genre.
- Integrated SunoAI for music generations and OpenAI for lyric translation and annotation, which helps teaching concepts.

Embedded System Capstone: Predictive Pulse Oximeter | *C, C++, Python, JavaScript*

- Developed non-invasive pulse-oximeter sensor to make interpretable prediction of patients being at risk of hypoxemia (low oxygen saturation level)
- Developed a deep learning classification algorithm on Raspberry Pi using Python Keras and Tensorflow libraries and obtained human-research clinical dataset for training and testing purposes.
- Obtained a hypoxic prediction model with 76% accuracy

Achievements

CrimsonCode Hackathon 2025, *Best GenAi Winner & Main Track Winner, (https://devpost.com/software/sympholingo)*
AgAID Digital AgATH0N 2025, *2nd Place Winner, (https://www.linkedin.com/in/loctran710/)*

Technical Skills

Programming Languages: C/C++, Python, Java, JavaScript, CSS, SQL
Tools & Cloud Services: AWS, Docker, Git, Github, Bitbucket, ClearCase, Confluence, Jenkins
Framework & Technologies: React.js, Node.js, BootStrap, Express.js