Khang Tran

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Education

Princeton University *Sept 2024 – May 2028*
BSE in Mechanical and Aerospace Engineering *Princeton, NJ*

- **Relevant Coursework:** Classical to Quantum Mechanics, Algorithms & Data Structures
- **Extracurricular:** Rocketry, Robotics, Princeton Students in Quantum

National University of Singapore *Aug 2022 – May 2023*
Dual Enrollment in Computer Science and Computer Engineering *Singapore*

- **Grade:** A
- **Relevant Coursework:** Computer Organization, Introduction to Operating Systems, Engineering Principles and Practices I & II

NUS High School of Math and Science *Jan 2020 – Nov 2023*
Honours in Computer Science and Engineering. Majors in Physics, Math, and Chemistry *Singapore*

- **Grade:** 4.9/5.0
- **Relevant Coursework:** Physics Olympiad Training, Java, JavaFX, Android Development, Introduction to Artificial Intelligence, Algorithms & Data Structures, Database Design, Computer Networking
- **Extracurricular:** Media Club (Video), Physics Olympiad Training, Singapore Physics League Organizing Team

Technical Skills

Software: KiCAD, Fusion 360, Onshape, Kerbal Space Program, Blender, Adobe Premiere Pro

Languages: HTML, (S)CSS, JavaScript, TypeScript, Python, C/C++, Java, Kotlin, SQL, MATLAB/Octave, Mathematica, LaTeX, Vietnamese, English

Frameworks/Libraries: Svelte, Flask, JavaFX, Node.JS, Tensorflow, NLTK, spaCy, Scipy, Sympy, etc...

Physics: Classical Mechanics, Electrodynamics, Thermal Physics & Statistical Mechanics, Special Relativity

Engineering: Machine Learning (Natural Language Processing and Image Recognition), Operating System Design, Concurrent Programming, Low-level/Bare-metal Programming, Circuit Analysis, Signal Processing, Microcontrollers

Experience

Space Systems Engineer Intern *Singapore*
Aliena *Oct 2023 – Mar 2024*

- Designed and built hardware and software for testing the Electronic Control Unit on Aliena's current Hall thruster.
- Developed end-to-end software pipeline for remote automation of lab equipment for ignition test of 5A cathodes.

Projects

Shielding-Free Signal Noise Suppression in Portable Low-Field MRI *Apr 2022 - Aug 2023*
Singapore University of Technology and Design (SUTD) report

- Developed a shielding-free signal noise suppression system for SUTD's portable magnetic resonance imager under the mentorship of Professor Huang Shaoying and her team.
- Poster presentation at International Conference for Magnetic Resonance Microscopy 2023
- Singapore Science and Engineering Fair (SSEF): *Silver*
- Tools Used: Python, Java, Pulseq, MATLAB, and Manual Labour

Infinite Regress: Citation Graphing, Clustering and Multi-Document Summarization of Academic Articles report

- Built front-end and back-end for scraping papers, generating citation graphs, clustering, and multi-document summarization using transformers and techniques in natural language processing.
- Tools Used: Python, Vue

Ok, Bloomer! ok-bloomer

- A service built using Svelte (TypeScript & SCSS) and MySQL connecting plant buyer and seller
- Tools Used: Svelte, SvelteKit, MySQL