NUTTHAWAT PANYANGNOI

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WORK EXPERIENCE

Hardware Test Engineer (Vendor via Tezerakt LLC) **10/2025 to currently active working**
Google **Mountain View, CA**

- Performed environmental chamber testing on Google enterprise and development hardware to validate design reliability under extreme conditions (temperature, humidity, and stress).
- Monitored chamber conditions and system metrics in real time to ensure accurate environmental simulation without risking hardware integrity.

Student Researcher **08/2024 to 12/2024**
NASA Proposal Writing and Evaluation Experience **Remote**

- Conducted in-depth research on high-voltage battery systems and investigated laser-based charging methods to support extended-duration space missions.
- Co-authored a research proposal on high-voltage, laser-chargeable battery systems for space missions, contributing to concept development, technical writing, and feasibility analysis.

Student Researcher **01/2024 to 08/2024**
NASA L'SPACE Mission Concept Academy (NASA Marshall Space Flight Center & Arizona University) **Remote**

- Played an active role in a simulated NASA Discovery Mission, assisted in managing mission schedules by forecasting and aligning critical milestones using NASA's project review and tracking systems.
- Conducted mission cost analysis by researching historical data and applying NASA's official tools to estimate budgets, resources, and instrumentation needs.

IT Technician (Full time) **03/2020 to 08/2023**
Mountain Cascade, Inc. **Livermore, CA**

- Provided end-to-end IT support by identifying, troubleshooting, and resolving hardware and software issues in corporate environment.
- Performed hands-on technical work such as hardware repair, system upgrade, BIOS flashing, RAID configuration, VPN setup, and regular maintenance of servers and workstations.

Frontend Software Developer (Full time) **04/2018 to 03/2020**
Amber System Technology **Pleasanton, CA**

- Designed and refined the user interface of point-of-sale systems to ensure smooth navigation, visual appeal, and ease of use for small business clients and developed full-stack web applications provided long-term scalable solutions.
- Led front-end development of custom web application software by collaborating with clients to understand their goals and turning those into functional features.

EDUCATION

Bachelor of Science: **Computer Engineering**, **Minor in Computer Science** **Expected in 12/2025**
San Jose State University (San Jose, CA) **GPA: 3.33/4.0**

Associate of Science: **Computer Science**, **Minor in Mathematics** **05/2022**
Las Positas College (Livermore, CA) **GPA: 3.4/4.0**

TECHNICAL SKILLS

Programming: C, C++, Python, JavaScript, MySQL, Verilog, HTML, CSS, React, React native, MongoDB, Verilog, FPGA
Machine Learning: PyTorch, TensorFlow, NumPy, Scikit-learn, Pandas, OpenCV, CUDA
Hardware & IT support: BIOS flashing, Raid configuration, NAS setup, Networking and Hardware troubleshooting
Operating systems: Linux, Window, Mac

PROJECT EXPERIENCES

Handheld Computing Device (C, ASM, Linux, KiCad, Raspberry Pi CM4) **In Progress**

- Designing and developing a handheld computer powered by Raspberry Pi CM4 on a custom Clockwork mainboard.
- Built a lightweight Linux Operating System including custom kernel, C program to toggle with MCU, L2C, GPIO, etc.

Neural Network Classifier – Iris Dataset (PyTorch, NumPy, Pandas, Python, Scikit-learn) **May 2025**

- Built a supervised neural network model to classify Iris flower species, leveraging linear regression as a baseline for comparison.

- Implemented model training with Adam optimizer and cross-entropy loss, tracking evaluation accuracy on test data.

Miscellaneous Embedded Projects in classroom (RTOS, C) **Apr 2025**

- Developed a C program to toggle on the Texas Instrument MCU MSP432 in RTOS, internal, external oscillators
- Implemented peripheral function to interact with the MCU such as AES-128 encryption, access Flash memory, SRAM, send text through UART port, create ADC digitize Timer Trigger, measure ADC temperature, etc.

FPGA implement RISC-V CPU Pipeline (Vivado, Verilog, System Verilog) **Apr 2025**

- Developed and design CPU pipeline for RISC-V architecture using Verilog and AI tools (for learning purpose)
- Implemented circuit using Altera modalism simulated mux's, ALUs, data registers, Finite state machines, CPU design, etc.

Square & Triangular Waveform Generator Circuit (LTspice, Schmitt-Trigger CD-40106, Oscilloscope) **May 2024**

- Designed and simulated a waveform generator using LTspice to produce square and triangular wave outputs across varying frequencies, leveraging a Schmitt-Trigger (CD-40106) and BC547B transistor.
- constructed and tested the circuit on a breadboard to verify functionalities with an oscilloscope and confirming design accuracy against simulation results
- Applied circuit analysis skills such as RLC circuit, op amps, MOSFET, diodes, transistors, Oscilloscope, etc.

Note Hub Web Application (Python3, Flask, SQL Alchemy, Django) **Apr 2023**

- Built a web-based note-taking application inspired by Notion, allowing users to create, update, and delete notes.
- Implemented secure login system and session management using Flask and SQLite for lightweight deployment.

CERTIFICATIONS

Google Career: Foundations of Data Science, Get Started with Python **06/2025**
LinkedIn Career: MySQL and Computer Components and Peripherals for IT Technicians **06/2025**
NASA L'SPACE Mission Concept Academy Certificate of Completion **12/2024**
NASA Proposal Writing and Evaluation Experience Certificate of Completion **12/2024**

EXTRACURRICULAR ACTIVITIES

Las Positas College Computer Engineering Club **Active member - 2022**

- Weekly collaborated on C++ projects leveraging data structure to implement efficient algorithm solved complex problems.

San Jose State Machine Learning Club **Active member - 2025**

- Monthly collaborated on projects applying machine learning techniques (Neural Network, NLP models, etc.)
- Participated on latest ML technology and workshops and technical discussions outside the classroom.

San Jose State Cube3 Satellite Club (We built Satellite) **Active member - 2025**

- Developed embedded C programs for the Astraeus-1 control board, enabling communication across multiple microcontrollers and integrating onboard sensors (XBee PRO S38 radio, barometer Mel3115, motion tracker ICM 20948, GPS, NEO M9N rope meter level GNSS position, and Micro Mod MCU).
- Partially implemented real-time data processing pipelines and built a React web interface to display system performance metrics and sensor outputs.

San Jose State Honor Engineering Club Tau Beta Pi **Active member - 2025**

- Recognized for academic excellence and active participation in Tau Beta Pi, engaging in professional development events such as guest lectures and engineering seminars.

San Jose State Software Engineering Club **Active member - 2025**

- Participated in coding challenges, technical talks, and peer collaboration events.