

# NUTTHAWAT PANYANGNOI

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## SUMMARY

Resourceful and technically skilled Computer Engineering student with a strong foundation in software development, machine learning, and embedded systems. Experienced in building full-stack web and mobile applications using Python, React Native, Flask, and SQL, with hands-on exposure to deep learning tools like PyTorch and TensorFlow. Contributed to NASA-led programs, collaborating on proposal writing, mission design, and technical analysis. Demonstrates consistent problem-solving ability, attention to detail, and the versatility to work across both software and hardware environments. Actively seeking opportunities to apply practical coding skills and systems thinking in real-world software engineering roles.

## EDUCATION

### Bachelor of Science: Computer Engineering

San Jose State University

- *Minor in Computer Science* / GPA: 3.33 / 4.00

Expected in 12/2025

San Jose, CA

### Associate of Science: Computer Science

Las Positas College

- *Minor in Mathematics* / GPA: 3.4 / 4.0

05/2022

Livermore, CA

## TECHNICAL SKILLS

**Programming Languages:** C, C++, Python, JavaScript, SQL, Verilog, HTML, CSS

**Machine Learning & Deep Learning:** PyTorch, TensorFlow, NumPy, Scikit-learn, OpenCV, Jupyter, CUDA

**Embedded Systems & Circuit Design:** Raspberry Pi CM4, FPGA (Verilog/SystemVerilog), LTspice, Oscilloscope, KiCad

**Software & Tools:** Docker, VMware, Vivado, SolidWorks, Office 365, Figma

**Hardware & IT Support:** BIOS flashing, RAID setup, VPN configuration, NAS management, troubleshooting

**Operating Systems:** Linux, Windows, macOS

## WORK EXPERIENCE

### Computer Engineer

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-wrote and presented a technical proposal that was selected by NASA Marshall Space Flight Center for further review due to its innovation and practical feasibility.
- Collaborated with engineers and analysts to evaluate new aerospace concepts and contributed to the design of early-stage prototypes used for proof-of-concept modeling.

### Program Analyst & Computer Engineer

01/2024 to 08/2024

#### NASA Mission Concept Academy

Remote

- Played an active role in a simulated NASA Discovery Mission, contributing to technical planning for a lunar water sample retrieval and return operation.
- 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

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 a busy corporate environment.
- Performed hands-on technical work including BIOS flashing, RAID configuration, VPN setup, and regular maintenance of servers and workstations.
- Managed the company's hardware inventory while coordinating repairs, system upgrades, and workstation setup for new and existing staff.

### Frontend Software Developer

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 business clients.
- Led front-end development of custom software by collaborating with clients to understand their goals and turning those into functional features.
- Developed and maintained full-stack web applications that improved operational workflows and provided scalable long-term solutions for small businesses.

## PROJECTS

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**FoodReal iOS Application** (React Native, Tailwind, Expo, Firebase) In Progress

- Designing a mobile app that promotes home-cooked meals and social food sharing through swipe-based interaction.
- Built a clean, user-friendly interface and integrated Firebase backend to support user accounts and engagement features.

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

- Developed a modular handheld computer using the Raspberry Pi CM4 and ClockworkPi mainboard for embedded systems work.
- Configured a custom Linux OS, including bootloader, device tree, and performance optimization for mobile computing.

**Note Hub Web Application** (Python, Flask, SQLAlchemy, Django) Apr 2023

- Built a web-based note-taking platform 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.

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

- Trained a neural network to classify sign language gestures, then deployed the model to a Raspberry Pi with live webcam input.
- Reduced latency and improved performance by applying PyTorch quantization and tracking accuracy metrics on-device.

## CERTIFICATIONS

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**NASA L'SPACE Mission Concept Academy** – NASA L'SPACE | Aug 2024

- Completed a 3.5-month training simulating the NASA Discovery mission lifecycle, including concept planning, systems design, and milestone reviews.

**NASA Proposal Writing and Evaluation Experience** – NASA Marshall Space Flight Center | Dec 2024

- Participated in a NASA-led innovation initiative; co-authored a selected proposal on high-voltage, laser-chargeable battery systems for space missions.

**Foundations of Data Science** – Google | Jun 2025

- Trained in data collection, interpretation, and foundational analytics; completed exercises in data handling and real-world scenarios.

**Get Started with Python** – Google | Jun 2025

- Completed project-based Python training with emphasis on scripting, data analysis, and solving practical programming problems.

**Computer Components and Peripherals for IT Technicians** – LinkedIn Learning | Jun 2025

- Gained knowledge in computer hardware, peripheral devices, and IT support fundamentals including system diagnostics and maintenance