

Tinh-Phong Nguyen

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EDUCATION

California Polytechnic State University

San Luis Obispo, CA

Bachelor of Science in Computer Science — GPA: 3.81

June 2026

- Relevant Coursework: Operating Systems; Artificial Intelligence; Theory of Computation; Distributed Systems, Networks and Parallel Computing; Computer Security; Databases; Programming Languages; Software Engineering; Algorithms; Data Structures; Computer Organizations; Object-Oriented Programming

EXPERIENCE

SPHERE Software Engineering Intern

June. 2025 – Present

USC ISI Sphere Research Infrastructure

Marina Del Ray, CA

- Developed a full-stack calendar and heatmap system (React, PatternFly, and TypeScript), saving teams 10+ hours of manual scheduling per week and supporting 200+ monthly reservations
- Tested and validated backend materialization processes by creating mock experiments using the SPHERE research infrastructure to ensure correctness in experiment realization, materialization, and XDC execution
- Implemented memoization and API call deduplication, reducing redundant data fetches by 90% and eliminating 150+ expensive calculations per render to improve UI responsiveness

Software Developer

Dec 2024 – May. 2025

Cal Poly — AI For Search & Rescue

San Luis Obispo, CA

- Collaborated with a team to design and develop a web application using React, Node.js, and Firebase, digitalizing search and rescue operations and leveraging AI models to improve search accuracy and efficiency
- Adapted a React-based dashboard to visualize AI-predicted clue locations, enabling search and rescue teams to analyze incident data efficiently in the command post

Full-stack Software Engineering Intern

June 2024 – Aug. 2024

4yourbusiness INC.

Pleasanton, CA

- Deployed a scalable inventory management platform with React, Electron, and MySQL that automated product data updates, eliminating manual processes and saving staff 2+ hours per day
- Engineered secure inter-process communication between Electron renderer and Node backend with context isolation, encapsulating MySQL CRUD within a service layer to safeguard data access
- Modernized inventory infrastructure by transferring 1,000+ product records from Microsoft Access to MySQL, employing validation and de-duplication strategies to strengthen data accuracy and long-term scalability

PROJECTS

HorseGPT

Feb. 2025 – June 2025

AI Horse Race Predictor

San Luis Obispo, CA

- Trained a Gemma 3 model with LoRA fine-tuning on 200,000+ horse races (1990–2020) using Torch, Unsloth, and Pandas, reaching 60% prediction accuracy which outperforms baseline guessing rates
- Leveraged Cal Poly's Unix server GPUs to train and run our LLMs in GGUF format, cutting training time by 40% and reducing inference latency to sub-second prompt responses
- Developed a web app using React, Node.js, and Python, streamlining users' access to our trained LLMs

Aery

Sep. 2024 - Dec. 2024

Collaborative Motivation Streaks App

San Luis Obispo, CA

- Built a full-stack social media app (TypeScript, React, Next.js, Docker, PostgreSQL), enabling students to track and share daily streaks and habits within friend groups
- Integrated a secure authentication system using Zod for input validation, NextAuth.js for session management, and custom middleware to enhance security

SKILLS

Languages: Java, Python, C, SQL, JavaScript, TypeScript, HTML/CSS, RISC-V Assembly, Racket, Golang

Libraries/Frameworks: React, Node.js, Electron.js, Express.js, Next.js, Spring, Unsloth, Tensorflow

Databases: MySQL, PostgreSQL, MongoDB, Prisma

DevOps: Docker, AWS, Nginx, Web Sockets

Tools & Others: Git, Postman, SPHERE Research Infrastructure, REST API