

# Tinh-Phong Nguyen

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## SKILLS

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**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, Minitab

## EXPERIENCE

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### SPHERE Software Engineering Intern

June. 2025 – Present

*USC ISI Sphere Research Infrastructure*

*Marina Del Ray, CA*

- Enhanced experiment scheduling and visibility by developing calendar UI with **React**, **PatternFly** and **TypeScript** that allows users to reserve resources for future use and view resource states—including creation, start, and expiration times—on an interactive timeline for improved planning and coordination by **40%**
- Tested and validated backend materialization processes by creating mock experiments using the **SPHERE research infrastructure** to ensure correctness in experiment realization, materialization, and **Experiment Development Container (XDC)** execution
- Streamlined CLI integration by leveraging the **MergeTB** command-line tool to initiate and debug **50+** experiment workflows, reducing setup and debugging time by **30%**, and strengthening overall system robustness in a multi-user research environment

### Full-stack Software Engineering Intern

June 2024 – Aug. 2024

*4yourbusiness INC.*

*Pleasanton, CA*

- Employed a full-stack web application/desktop program utilizing **MySQL**, **React.js**, **Node.js**, **Express.js** and **Electron.js**, following **Agile** development methodologies to improve and optimize company inventory management, resulting in improved accuracy and seamless operations by **59%**
- Led a strategic migration process from Microsoft Access to MySQL, integrating data migration tools that enhanced system reliability while reducing data retrieval times, resulting in a **25%** improvement in operational efficiency
- Incorporated eBay Selling and Browse APIs to facilitate inventory tracking, enhancing listing/inventory effectiveness

## PROJECTS

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### HorseGPT | *Python, Pandas, Torch, Unsloth, React, JavaScript, Gemma 3, Llama 2*

Feb. 2025 – June 2025

- Developed a full-stack web application using React and JavaScript for interactive user access to fine-tuned **Gemma 3 and LLaMA 2** models, integrating back-end Python APIs to dynamically display model predictions based on user input
- Achieved **60%** prediction accuracy with the **Gemma 3 LoRA-trained model** by fine-tuning on a dataset of over **200,000+** horse races (1990–2020) using **Torch**, **Unsloth**, and **Pandas**, significantly outperforming baseline guessing rates
- Deployed and tested large language models on Cal Poly's GPU Unix servers, uploading optimized GGUF-format models and ensuring seamless local inference and data handling across frontend and backend systems

### Aery | *TypeScript, React, Next.js, Docker, Prisma, PostgreSQL, Zod, Chakra UI*

Sep. 2024 - Dec. 2024

- Built a full-stack social media app with **TypeScript**, **React**, **Next.js**, **Docker**, **PostgreSQL** and **Prisma**, enabling over **100 students** to track and share daily streaks and habits within friend groups, fostering community engagement and accountability
- Integrated an authentication system from scratch using **Zod** for input validation, **NextAuth.js** for session management, and custom middleware to enhance security

## EDUCATION

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### California Polytechnic State University

San Luis Obispo, CA

*Bachelor of Science in Computer Science — GPA: 3.8*

*June 2026*

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