Tinh-Phong Nguyen

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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, Minitab

EXPERIENCE

SPHERE Software Engineering Intern — June. 2025 – Present
USC ISI Sphere Research Infrastructure — *Marina Del Ray, CA*
- Enhanced experiment scheduling and visibility by developing a system for scheduling realizations for future use using **React, PatternFly, and TypeScript** to improve 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 **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%**

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*
- Employed a full-stack web application/desktop program utilizing **MySQL, React, 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, resulting in a **25%** improvement in operational efficiency
- Incorporated eBay Selling and Browse APIs to facilitate inventory tracking, enhancing listing/inventory effectiveness

PROJECTS

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

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

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