

Matthew Tuan Nguyen

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EDUCATION

University of California, Irvine

Irvine, CA

B.S. Software Engineering

Expected Grad Dec. 2027

Relevant Coursework: Data Structures & Algorithms, Object-Oriented Programming, Linear Algebra

EXPERIENCE

Onda

Irvine, CA

Founding Engineer

Jun. 2026 - Present

- Architected and built core parts of a cross-platform **iOS/Android social activity app** as a founding engineer, spanning React Native UI, Firestore data models, and Firebase security using **Expo SDK 55 and TypeScript**.
- Designed a **server-enforced privacy model** using Firestore security rules and denormalized authorization fields, preventing unauthorized access to event and user data.
- Hardened Firebase security with **390+ Jest and Firestore Emulator tests** to verify business logic, security rules, and edge cases, catching regressions in backend behavior.
- Shipped real-time features including map-based event creation, trust-tiered friend circles, live location sharing, push notifications, headcount interest checks, and RSVP arrival-time tracking.

Union of Vietnamese Student Associations

Garden Grove, CA

Web Developer

Jul. 2025 - Mar. 2026

- Collaborated in a team of **5 developers** to build a responsive website with **Next.js, React, and TypeScript**, structuring **15+ routes** with reusable, section-based components.
- Built a shared UI component library using **Radix UI and Tailwind CSS**, providing consistent and accessible components across the site.
- Developed and tested **event registration, content, and interactive features** supporting **10,000+ annual users** and **\$100,000+ in event revenue**.

PROJECTS

Kilter Grade Predictor - ML Model

Python, PyTorch, SQL, SQLite, Pandas, NumPy

- Trained a **PyTorch CNN on 238K Kilter Board climbs**, achieving **1.65 MAE** and **75.5% accuracy within one grade**.
- Built a SQLite data pipeline, fixed a hold-role labeling bug, and prevented data leakage by splitting on unique climb IDs.
- Established **three statistical baselines** to validate model performance.

Hokiefessor - Professor & Course Insights Platform

JavaScript, Python, React, FastAPI, OpenAI

- Built an **LLM-powered application** using RAG, Databricks, and FastAPI for real-time course grade and professor review analysis.
- Built a data pipeline processing **1,000+ course grade records** across multiple academic terms.
- Optimized model queries and caching strategies, **reducing average latency by 35%**.

TrainAI - Fitness Assistant

JavaScript, Python, React, FastAPI, OpenAI, Vercel, Render

- Built a full-stack AI fitness assistant using **HTML, CSS, JavaScript, and FastAPI** that generates personalized training plans from user input.
- Developed a **REST API** to process user inputs and generate AI-powered recommendations through the **OpenAI API**.

TECHNICAL SKILLS

Languages: Python, C++, Java, JavaScript, TypeScript, SQL, HTML, CSS

Frameworks: React, React Native, Expo, Next.js, Expo

Backend/Cloud: FastAPI, Firebase, Firestore, Realtime Database

Machine Learning/AI: PyTorch, pandas, NumPy, TensorFlow, Scikit-learn, OpenAI API

Tools: Git, Databricks, Firestore Emulator