

Khang Minh Bui

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EDUCATION

Washington State University

B.S. Computer Science

Expected: May 2026

GPA: 3.87

Seattle Central College

A.S. Computer Science

Graduated: June 2023

GPA: 3.96

EXPERIENCE

Full Stack Engineer

AgAID Institute & WSU AgWeatherNet

May 2025 – Present

Pullman, WA

- Built and maintained **Flask/MySQL/InfluxDB APIs** and a **React.js UI** for ranch and IoT device management, enabling reliable data tracking, efficient farm operations, and **increasing user engagement by 37%**.
- Developed a heat stress visualization and interactive environmental monitoring tools to protect livestock health with timely alerts.
- Rebuilt the WSU AgWeatherNet website with **Go** backend and **React.js** frontend, and created an **Express.js** microservice for IDW interpolation, delivering fast, accurate real-time maps of air temperature, soil moisture, and precipitation.

AI & Backend Engineer

Pathcrusher Interactive, Inc.

Mar 2025 – Present

Remote

- Built scalable, secure RESTful APIs using **NestJS** and **TypeScript** for an educational app that personalizes learning paths based on user goals, **reducing response latency by 28%** through OpenAI integration and optimized route handling with caching.
- Optimized database performance by 35%** to support daily user interactions by designing and maintaining relational data models in **PostgreSQL** using **TypeORM**.
- Participated in Agile sprint cycles with a 7-person engineering team, contributing to sprint planning, code reviews, and feature discussions in a cross-functional environment.

Frontend Developer Intern

AVOLTA, Inc.

Nov 2023 – July 2024

Remote

- Built a cross-platform **React Native** mobile app with real-time car security alerts and secure user authentication, contributing to a **40% increase in user engagement**.
- Reduced API data fetch latency by 33%**, improving UX responsiveness, by optimizing frontend-backend data flow.
- Worked on a 5-person team to align UI/UX design with technical constraints, resolving an average of 10+ UI bugs per sprint to ensure high-quality performance across both iOS and Android.

PROJECTS

AgWeatherNet Website — React.js, Go, Express.js, MySQL, InfluxDB

- Rebuilt the WSU AgWeatherNet website with a modern **React.js** and **Go**, integrating an **Express.js microservice** for IDW interpolation to process weather-station data efficiently.
- Developed interactive maps and dashboards to display real-time air temperature, soil moisture, and precipitation, improving operational visibility and stakeholder engagement across the Pacific Northwest.

WeatherSonde — React Native, TypeScript, Java (Native Modules), SQLite

- Led mobile development using **React Native** and **SQLite** for a drone-based environmental monitoring app, enabling orchard farmers to detect temperature inversions and protect their fruit trees from frost damage.
- Built custom **Java** native modules for USB serial communication to transmit real-time GPS, temperature, humidity, and pressure data from drone hardware to the mobile app, where inversion conditions are computed.

Sympholingo — React.js, TypeScript, Express.js, Vite, OpenAI, SunoAI

- Built an AI-powered language learning app using **React.js** and **Express.js** generating original songs in users' target languages based on preferred genres.
- Integrated SunoAI API for music generation and OpenAI for translation and grammar analysis, reinforcing grammar concepts through interactive audio playback.

ACHIEVEMENTS

CrimsonCode Hackathon 2025, *Best GenAI Winner & Main Track Winner* (<https://devpost.com/software/sympholingo>)

AgAID Digital AgATHON 2025, *2nd place Winner* (<https://agaid.org/digital-agathon-2025/>)

AI For Change Hackathon 2024, *Winner* (<https://devpost.com/software/nutriscan-z4owgh>)

TECHNICAL SKILLS

Programming Languages: TypeScript, JavaScript, Python, Java, C#, C++, SQL

Frameworks & Technologies: React.js, React Native, Next.js, Node.js, Express.js, NestJS, ASP.NET Core, Flask, FastAPI

Databases & ORMs: PostgreSQL, MySQL, MongoDB, SQLite, Sequelize, TypeORM

Tools, Platforms, & Cloud Services: Linux, AWS, Docker, Git, GitHub, GitLab, Render, Vercel, Netlify.