

ETHAN NGUYEN

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Education

Northern Illinois University

Bachelor of Science in Computer Science, Minor in Business Administration

January 2025 – May 2027

DeKalb, IL

College of DuPage

Associate in Arts

August 2022 – December 2024

Glen Ellyn, IL

Work Experience

OpalWhite

Full-Stack Software Engineer

January 2026 – Present

DeKalb, IL

- Lead full-stack architecture for InvenChef, an AI-powered restaurant inventory startup priced 5–10x below competitors (BlueCart, Orderly, Restaurant365), targeting \$80K–\$250K in annual savings per restaurant
- Built a multi-page dashboard in JavaScript and Supabase with real-time reads/writes, supporting AI-driven pattern recognition alerts and predictive reorder recommendations
- Designed a multi-tenant PostgreSQL schema for inventory tracking, order history, and predictive reorder logic, enforcing referential integrity through foreign key constraints and parameterized queries

CPI Openfox

Junior Software Engineering Intern

June 2026 – August 2026

Bolingbrook, IL

- Shipped audit workflow features across weekly agile sprints on a Node.js and Apache-served stack, translating requirements from law enforcement auditors directly into a React website within a 7 week timeline
- Redesigned the data model for a React + Node.js audit platform deployed across 31 states to 1,000s of law enforcement agencies, normalizing into a PostgreSQL schema and eliminating cascade failures that required full database restores
- Debugged database conflicts that blocked audits from moving through their status stages (Pending → In Review → Completed), making the system more reliable for the statewide network of law enforcement auditors who depend on it as their official record

Northern Illinois University Esports

Broadcast Technology Operations Intern

January 2025 – May 2026

DeKalb, IL

- Produced and managed 50+ live esports broadcasts across 5 varsity game titles with 99.9% uptime, reaching 150–300 concurrent viewers over 12+ months
- Designed and deployed 5+ custom real-time broadcast overlays using HTML, CSS, JavaScript, and Node.js, each tailored to a distinct game title's format
- Reduced broadcast delay by 5 seconds by engineering low-latency pipelines using NDI and SRT protocols, improving live viewer experience across all productions

Projects

Meatball Mall | *HTML, CSS, PHP, SQL, MariaDB*

April 2026 – May 2026

- Developed a full-stack e-commerce web application with a 7-table relational schema supporting dual user roles, product browsing, cart and checkout, and an employee-facing inventory management dashboard
- Implemented role-based access control distinguishing customer and employee workflows, enforcing data integrity across order fulfillment and inventory updates via parameterized queries

NeuroCast | *HTML, CSS, Node.js, ElevenLabs AI, Cloudflare Workers*

March 2026 – April 2026

- Architected an AI-powered neuro-adaptive podcast generator mapping biometric and mood inputs to generative audio parameters using the Arousal-Valence Model and ElevenLabs Voice API
- Shipped a fully client-side audio pipeline with zero backend latency, handling audio stitching via OfflineAudioContext and API proxying via Cloudflare Workers

Valorant Post-Match Generator | *Python, Riot Games API*

January 2025 – May 2025

- Automated post-match graphic generation by building a Python pipeline on the Riot Games Valorant API, reducing turnaround time from several minutes of manual effort to near-instant output
- Deployed to 20+ esports organizations including NIU Esports and ESC Conference events, generating 30+ graphics per competition weekend

Technical Skills

Languages: C++, C#, Java, JavaScript, Lua, SQL, PHP, Python

Developer Tools: Apache, Git, Docker, Linux, UNIX, Google Cloud, AWS, Azure, Cloudflare

Frameworks and Technologies: HTML/CSS, Node.js, React, Bootstrap, Flutter, Supabase, PostgreSQL, MariaDB

Libraries: Pandas, NumPy, Matplotlib, TensorFlow, ElevenLabs API