

NATE WHITE

Software Engineer | C++ / C# / Python / System Design / ML

Seattle, WA | (425) 518-1209 | NateWhite.dev@gmail.com

linkedin.com/in/nathan-white-799765218 | github.com/nateprogram | natewhite.dev

Summary

C++, C#, Python, and TypeScript engineer. Shipped a cross-platform scheduling app under my LLC. Created a live ML trading research platform and a custom C++ engine. I use Claude Code to ship MVPs fast. Shipped with multi-disciplinary teams of 6 and 19 at DigiPen.

Skills

Languages: C++, C#, Python, TypeScript, Java

Frameworks & Engines: PyTorch, FastAPI, Next.js, React, Capacitor, Unreal Engine 5, Unity, OpenGL

Tools, Infrastructure & Databases: Git, Docker, Jenkins, Vercel, Linux, PostgreSQL, Prisma, SQLite

Education

BS Computer Science & Game Design | DigiPen Institute of Technology | Redmond, WA | 2021 - 2026

Experience

Founder & Engineer | Veltarium Software LLC | Redmond, WA | Mar 2026 - Present

- Built a cross-platform scheduling app for adult soccer league players and managers, shipped under my LLC.
- Wrote a 19-model Prisma schema and 40+ API handlers covering leagues, seasons, teams, rosters, events, RSVPs, chats, payments, and a player marketplace.
- Uses external tools such as Neon (DB), Clerk (user auth), Stripe (payment processing), Firebase (push notifications).
- Backend sources league sites and auto-populates the database with season schedules and teams.
- Single TypeScript codebase across web (Vercel) and mobile (Capacitor for iOS / Android).

Software Development Intern | Spur Reply | Redmond, WA | Jun 2021 - Aug 2021

- Shipped React + TypeScript client microsites through the firm's .NET + Azure DevOps pipeline.
- Developed Power BI dashboards across multiple projects for client-facing data.

Software Development Intern | Spur Reply | Redmond, WA | Jun 2020 - Aug 2020

- Automated a weekly newsletter pipeline reaching 10,000+ Microsoft employees, replacing a fully manual workflow.
- Created an internal Employee Morale Survey tool with Microsoft Power Automate that worked directly in Microsoft Teams.

Projects

StockAI | Live ML trading research platform | Python, PyTorch, FastAPI | 2024 - 2026

- Designed a MultiHeadLSTM which sources data about specific stocks from Yahoo Finance, news articles, social media platforms, including YouTube, X, Reddit, etc. to predict price movements of any given stock.
- ~11,500 LOC across 42 modules. Data feeds into correlation analyzers and LSTM which makes predictions on stock prices.
- Predictions are evaluated on accuracy by a retrainer to adjust and fine tune weights of different data points for more accurate predictions. Retrainer has automatic rollback to combat degradation.

Mayhem Engine | Custom C++ game engine created from empty VS project. | C++, GLFW, rapidjson, OpenGL | 2023 - 2024

- Created a particle system (~1,260 LOC): JSON-serialized emitters with extensive parameters for highly customizable behaviors that could be hot-reloaded from disk without a C++ rebuild.
- Wrote the stat/upgrade system (~710 LOC) with per-level upgrade arrays, so designers retune the upgrade curve by editing JSON instead of touching code.
- Designed the engine's input abstraction over GLFW. Shipped the engine's tower-offense title (Zeppelin Rush) to Steam.

Genetic AI | Created a Modular Genetic AI that played games to find optimal strategies | Python | 2024

- Evolved a Python genetic algorithm that played Zeppelin Rush and found the optimal strategy in 16 generations.
- Started with a sample of 60 random playthroughs then evolved and mutated the top performers for 10 new playthrough strategies which beat the best human achieved scores after 14 generations.
- Exposed balancing issues within the game to designers.

Treasure Party | Local 4-player couch party game | Unity, C# | 2024

- Owned several minigames with their own state machines developed primarily through custom C# classes.
- Authored the project's scene-persistent AudioManager with a priority-based channel pool.