

Ethan Rule

425-505-8020 | ethan2002@live.com | github.com/EthanRule

Education

Washington State University

Pullman, WA

Bachelor of Science in Computer Science

Aug 2020 - Dec 2024

Summary

Entry-level software engineer with full-stack SaaS experience and a proven record of launching products with paying customers. Skilled in TypeScript, React, Node.js, and Rust programming, with a strong foundation in algorithms, machine learning, databases, and test-driven development.

Work Experience

Rudarz.com - Software Engineer

Jun 2024 - Present

- Built a SaaS platform (Next.js, Node.js, PostgreSQL, and Stripe) that generated **\$5,000+ revenue from 300 paying customers** worldwide. Used by thousands of players to secure higher ratings in World of Warcraft.
- Automated sales with authentication using **Google OAuth** and payments using **Stripe and PostgreSQL**.
- Deployed GitHub repository on Vercel to utilize their automatic CI/CD and Neon PostgreSQL platform.
- Optimized app to score 95-100 in Google Lighthouse metrics (performance, accessibility best practices).

TruDate - Software Tester / Product Intern

May 2023 - Oct 2023

- Evaluated and tested core React Native features for a dating-app MVP, documenting 30+ UI/UX issues.
- Conducted competitor research (Tinder, Bumble, Hinge) to inform UX decisions based on industry conventions.
- Collaborated across design, marketing, and backend teams within an Agile environment to align goals.

Projects

Database Engine | [GitHub](#)

Mar 2025 - Aug 2025

- Built a database engine with B-Tree storage, BSON serialization, and an LRU cache for faster read/writes.
- Wrote **property tests to discover bugs from type casts** such as f32 to f64 and simpler cases like i64 to i32.
- Implemented custom file system paging and idiomatic Rust error handling using Test Driven Development.
- Designed custom display traits for error handling to assist in narrowing down errors from unique database parts.

Spreadsheet Engine | [GitHub](#)

Aug 2024 - Dec 2024

- Developed a .NET C# spreadsheet application using OOP design to model cells, formulas, and references.
- Built a **layered architecture, with subscribers and publishers to connect the back and frontend via events**.
- Implemented a modular architecture separating parsing, evaluation, and UI for maintainability, and applied the Command design pattern to handle undos and redos for user actions.
- Wrote unit tests with NUnit to validate formulas, references, and edge cases, ensuring reliable code quality.

AI Shot Detection | (Capstone Project)

Jan 2023 - Dec 2024

- Built an Android app with Google MediaPipe Machine Learning (ML) for real-time basketball shot detection.
- Optimized backend inference latency from **40ms to 1ms with an ML video analysis queue algorithm**.
- Led weekly standups with developers and clients to report progress and iterate requirements to serve users best.
- Integrated unit tests for critical app features, including the queueing algorithm and object detection model.

Technical Skills

Languages: TypeScript, Rust, Python, C#, HTML/CSS.

Frameworks: React, Next.js, Node.js, .NET, Tailwind, React Native, Cargo.

Tools/DB: Git, GitHub, GitLab, Copilot, Vercel, AWS (basic), PostgreSQL, MongoDB, Neo4j.