

Software Engineer

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WORK EXPERIENCE

. Arkansas

Software Engineer I

Feb 2023 - Sep 2025

- Improved performance, scalability, and reduced bugs across 7 micro frontend apps by leading a migration of front-end codebases from Vue 2 to Vue 3 and from JavaScript to TypeScript
- · Accelerated customer setup from 2 hours to 15 minutes by automating tasks with our internal C# Blazor admin tool
- Automated the ingestion of 2 Walmart Retail Link data sources into our Snowflake data pipeline by creating C# data connectors
- · Cut onboarding time from months to weeks by creating documentation and mentoring 9 new developers, juniors, and interns
- Ensured consistent code quality and reduced PR review time by adding linting and style rules into our Azure CI/CD pipeline
- Daily experience with TypeScript, Vue.js, C#, ASP.Net Core APIs, Azure, SQL, and interfacing with MicroStrategy and Snowflake

Pre-field Engineer

Jun 2011 – Feb 2023

· Reviewed commercial HVAC system designs and reported deficiencies to the mechanical engineer

PROJECTS

BFBB Decompilation Project

Open Source Sep 2021 – Present

- Working with a skilled team of reverse engineers to manually decompile a game for the Nintendo GameCube. This process involves studying PowerPC assembly instructions and low level data structures, analyzing control flow, and manually decompiling program logic back into high-level C++ source code, which when compiled matches the original executable perfectly at the bit level. This process effectively recreates the original source code
- Created an automated progress tracking website for the project using React

Lentokonepeli

Open Source Apr 2024 – Present

- Reverse engineered, re-implemented, and ported a 2D multiplayer Java Applet (defunct) browser game to Rust (with TypeScript + React), and WebRTC to facilitate peer connections and allow the game to be played again
- · Wrote a deterministic replay system to allow matches to be saved and watched again
- · Wrote custom binary network serialization macros to optimize data sent over the network

CCSR Port

Open Source Sep 2022 – Nov 2022

- Reverse engineered, re-implemented, and ported a series of beloved Macromedia Shockwave games (in Lingo) to TypeScript (with React), allowing them to run once again on the modern web
- Implemented improvements such as 60+ FPS, full-screen support, and support for translation to different languages
- Created a fully featured map editor using React and TypeScript

GameBoy Crust

Open Source Oct 2017 – Dec 2017

- Created a multi-platform emulator for the Nintendo Game Boy using Rust
- · Debugged assembly code and intricate system components, accurately implemented the Sharp CPU instruction set

EDUCATION

A.A.S. in Computer Science

, Virginia

Jun 2011 - Sep 2013

SKILLS, LANGUAGES, INTERESTS

- Languages: English (Native), Spanish (B2)
- Programming Languages: C#, TypeScript, JavaScript, Python, Rust, C/C++, Java, F#, Haskell
- Frameworks: ASP.NET Core, Entity Framework, React, Vue.js, Blazor, Node.js
- Tools: Git, Jira (Scrum / Agile), Confluence, Visual Studio Code, JetBrains Rider, Docker
- Cloud / DevOps: Azure (Service Bus, Functions, Blob Storage, App Insights, CosmosDB, Key Vault)
- BI & Data Analytics: SQL, MicroStrategy, Microsoft Excel, Snowflake
- Interests: Running, Chess (2000 Elo), Reverse engineering, Language learning, Travel