Henry Zimmerman

hgz1374@g.rit.edu · github.com/hgzimmerman · 847-287-1920

Profile

Dedicated Software Engineer specializing in finding and defining problems and leading the charge to solve them. Interested in leveraging new programming languages to write less ambiguous and more maintainable code. Competencies in:

- Full Stack Web Development
- Rust
- Linear and Agile Software Development
- Small Team Development
- Designing for Long-Term Maintenance
- Security in Distributed Systems

Education

BS Software Engineering *Rochester Institute of Technology*   Aug 2019

Relevant Experience

Software Engineer (Co-Op) *Ocient*   Aug 2016 - Jan 2017 | May 2017 - Aug 2017
DB Configuration Client *NodeJS, Angular 2+, TypeScript, Protobuf, Pivotal Tracker*
A distributed database product being developed required a tool so that nodes could be configured and monitored.
- Worked on a 2 person team to develop the backend and frontend of a webapp
- Created components for manipulating nodes, clusters, and configuring machine learning algorithms to run across the clusters

Performance Monitoring Tool *C++, Protobuf, NCurses*
The database engine development team didn't have insight into where performance bottlenecks were. They had instrumented performance counters in the engine, but had no way to visualize the data.
- Implemented a TUI utility to visualize performance counter data as benchmarks were run on the database, or emit CSV for further analysis
- Backend team was able to use the utility to assess the effects of their changes on the performance of the system

Software Engineer (Co-Op) *MedPoint Digital*   Jan 2018 - May 2018
JWT Security and Performance Audit *C#, .NET, JWT, JavaScript*
A set of APIs initially built without any security measures were being retrofitted with a JWT-based scheme to provide authorization for a distributed monolith.
- Discovered that the initial solution was not secure and far less performant than possible
- Wrote documents detailing how to exploit the vulnerability, and how to secure against the attack
- Proposed authorization solution would utilize database more than 13 times less frequently

Uptime Monitoring Tool *C#, .NET Core, Angular 2+, TypeScript*
Various services for a product had poor reliability and poor visibility for determining when they were unavailable, or if they had been down in the recent past.
- Wrote an internal tool that would record the recent uptime for the company's services and display them in a webapp
- Based on team needs, engineered a Webapp that displays history for 3 days for service availability for services running on dev, test, and production environments

Assistant Maintainer *YewStack*   April 2018 - Ongoing
Framework Contributor *Rust, Yew, WASM, StdWeb, JavaScript*
Yew, an Open Source Rust and WebAssembly based web framework modeled after Elm and React, needed developers to add features and fix bugs.
- Contributed minor bugfixes regarding semantics of Yew's Actor model implementation
- Added Services that bound to the browser's History Api and Resize events
- Contributed example code for transforming markdown into Yew's VDom nodes and a primitive router example
- Creator and Maintainer of the Yew's official router implementation

Team Experience

Rowing Instructor Taught sculling to rowing novices of all ages as a Summer job.   2012 - 2019

RIT Men's Crew Rowed and Coxed for RIT's 2nd Varsity 8.   2014 - 2017