

HENRY ZIMMERMAN

Rochester, NY · hg1374@gmail.com · 847-287-1920 · <https://github.com/hgzimmerman>

EDUCATION

BS Software Engineering, Rochester Institute of Technology

May 2019

RELEVANT EXPERIENCE

Ocient

Chicago, IL

Software Engineer (Co-Op)

Aug 2016 - Jan 2017 | May 2017 - Aug 2017

DB Configuration Client *NodeJS, Angular 2+, TypeScript, Protobuf*

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 and had instrumented performance counters in the engine, but had no way to visualize the data.

- Implemented a TUI utility using C++ and NCurses to visualize performance counter data, 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.

MedPoint Digital

Evanston, IL

Software Engineer (Co-Op)

Jan 2018 - May 2018

JWT Security and Performance Audit *C#, .NET, JWT, Javascript*

An set of APIs initially built without any security measures was being retrofitted with a JWT-based scheme to provide authorization for a distributed monolith.

- Discovered that the proposed solution was defective and far less performant than possible.
- Wrote documents detailing how to exploit the vulnerability, how to secure against the attacks, and how to remove reliance on external caches for the system.
- Proposed solution would reduce database utilization by the authorization system by more than 13 times the initially suggested system.

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.
- Webapp would display history for three days for service availability for services running on dev, test, and production environments.

PROFESSIONAL EXPERIENCE

Rowing Instructor

Taught sculling to rowing novices of all ages as a Summer job

2012 - 2018

RIT Men's Crew

Rowed and Coxed for RIT's 2nd Varsity 8

2014 - 2017