Work Experience

Senior Software Engineer, at Red Hat

Jan. 2023 - Present

- Identified and designed a plan with the engineering team to combat performance shortcomings with existing React applications.
- Created a frontend application designed to show customer active software subscriptions and show how much of their current money is going towards their yearly subscription quota by using Starburst database views and API.
- Created a design document outlining key areas within the EDA organization where application development for engineers could and should be improved in order to spin up more backend and frontend applications.

Full-Stack Software Engineer, at FordLabs (Ford Motor Company)

Sep. 2017 - Jan. 2023

- Led engineering team through an application rewrite, going from SCSS, custom style sheets, slow Selenium tests, to using fast component testing, TailwindCSS based upon new UX and UI requirements.
- Led development and maintenance of multiple open source and inner source software projects, designing the UI / UX and implementing the software code changes necessary for constant uptime and usage.
- Wrote an inner-source Authentication and Authorization server based on the OAuth2 and OpenID specifications. Connected this auth server to various email relays in order to send verification codes to users.
- Worked on the software hiring board, interviewing potential candidates for hire, accessing their skills using paired programming.
- Paired with new software hires to guide them through tech stack and engineering practices.
- Built an open source distributed Retro tool for usage within the company and for users who want to stand up and host their own instance and toured around campus to advocate for the software, explain to teams how it can help their daily workflow.
- Worked on the Ford Commercial Solutions project which utilizes MapBox to track vehicles across a geographic region and display on a map.
- Setup automated deployment environments for various applications using Jenkins, TravisCI, and Github Actions.
- Worked in a variety of backend and frontend languages and tech stacks, Java, Kotlin, Javascript, SpringBoot, Express, React, Angular
- Integrated with software databases using Prisma, Spring JPA, and integrated viewers.
- Wrote Terraform scripts and corresponding application API to build setup on-prem infrastructure such as databases, virtual machines, email relays.

Volunteer Non-Profit Full-Stack Software Engineer, at Higher Grounds

Sep. 2020 - May 2021

- Led team of software engineers and database administrators to create software that would serve as the starting point for a multiple school district wide rollout of software to help counselors interact and keep tabs on their students.
- Tech stack chosen was React, Typescript, PostgreSQL, and Auth0.
- I also did iterations on the UI requirements for the application, tweaking designs given from management to be more accessible and simpler.

Research and Hardware Engineer Co-Op, at Valeo

Jul. 2016 - May 2017

- Worked independently on developing internal software for automating the generation of camera calibration files.
- Created GUI software written with Qt and C++ that was used as a frontend application for the generation of calibration files.
- Worked independently on designing automated testing programs, using the Microsoft Windows C API and C++.
- Flashed calibration files over UART and CAN protocols, using the Vector Canoe software tool, to an embedded VPM which was used to test the vehicle cameras for various calibration errors, such as improperly rendered guidelines, camera bleeding, and image discoloration.
- Wrote applications to automate the testing of camera firmware files.

Aircraft Armament Systems Journeyman, at United State Air Force

Aug. 2009 - Feb. 2016

- Troubleshooted A-10 aircraft computer systems and diagnosed potentially damaging issues affecting the weapon systems, using wiring schematics and technical manuals.
- Repaired and reinstalled faulty computer systems such as wiring, connectors, and plugs, that were used on the A-10 weapon systems.

Additional Open Source Experience

AuthQuest Jan. 2019 - 2020

- An open source authentication and authorization server, designed to serve as a free alternative to services like Auth0 and Okta.
- Uses Kotlin and SpringBoot on the backend and a Vue.js frontend.
- Provides users with a default and highly customizable login / sign up page.

Follows OAuth2 and OpenID standards

RetroQuest Jan. 2018 - 2022

- Allows users to effectively facilitate agile retrospectives across distributed teams.
- Implemented websocket based CRUD operations so the application is constantly up to date.
- Designed a user interface that was put together with mobile usage in-mind.

Multi-System Video Game Emulator, Phoenix

Dec. 2013 - Present

- Led a team of developers in implementing a multi-threaded and multi-process video game emulator.
- Utilizes a GUI which was implemented using QML and C++ and a SQLite database for library management.
- Designed an audio and video pipeline for rendering audio and video streams for consistent 60 fps.
- This program is split up into multiple processes, using local sockets and shared memory for IPC communication.
- Video data is passed between processes in a region of shared memory and constructed into an OpenGL texture for rendering.

Education

Wayne State University, Detroit

B.S., Computer Science

Graduated: May 10th, 2017

GPA: **3.46** / 4.00

Skills

- OpenShift, JavaScript, Typescript, Kotlin, Python, SpringBoot, Next.js, Gatsby, TailwindCSS, React, Vue.js, Express, Koa, C++, QML, SQL, Heroku, PCF, Digital Ocean, NetlifyCMS, Jenkins, Github Actions
- Paired programming, Test Driven Development, Continuous Development & Integration