Jonah Alligood

Highly motivated software engineer with nearly six years of professional experience. Particularly strong in the areas of web technologies and backend development. Looking for new opportunities offering end to end product ownership and meaningful impact in the world.

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EXPERIENCE

Mastercard, O'Fallon, MO — *Senior Software Engineer*

AUGUST 2023 - PRESENT

- Writing in-house software to securely create, manage, and import existing cryptographic application keys to local and cloud HSMs. Lead design on importing existing keys.
- Leading design and development of pipeline for validating onboarding configurations from clients intending to use our distribution service. On average I saved 3-5 days of developer resources in manual validation.
- Mentoring younger and less experienced engineers to help grow them in healthy engineering and professional habits.
- **TypeScript, Java, Spring Boot, C++, Jenkins, PKCS11**

World Wide Technology, St. Louis, MO — *Developer*

FEBRUARY 2022 - AUGUST 2023

- Developed and tested EDI and RosettaNet integrations with partners using webMethods and PL/SQL.
- Developed internal applications monitoring partner integrations and managing hardware and software rebates with select vendors. Introduced business insights to thousands of daily transactions, and optimized other backend services to be 10x faster.
- Supported team in an on-call rotation.
- **TypeScript, React, Vue.js, Node.js, Jenkins**

Precision Planting, Peoria, IL— *Junior Software Engineer*

JUNE 2019 - AUGUST 2021

- Developed a memory mapping command line tool for converting various ELF dump formats into a unified internal file format to be used by an in-house debugger.
- Created and owned another command line project to generate C++ type definitions for CAN bus packets to be used in other software.
- Maintained parts of the 20|20 in-cab device orchestrator and data reader.
- **C++, Qt5**

EDUCATION

University of Illinois, Springfield, IL— *B.S. Computer Science*

AUGUST 2018 - AUGUST 2022

SKILLS

Javascript, Typescript, React, Vue, Node, Express, Tailwind, C++, PHP, Java

PROJECTS

pwds (2024)
- Local passwords manager using NSS databases and PKCS11
- Features password encryption rotation
- Uses remote X.509 certificates to encrypt and upload secrets to secure service.
- **C++, PKCS11**

Cube With Me (2022)
- Developed a speed cubing website for users to race one another.
- Service included the ability to create and join rooms.
- Implemented WebSockets to functionally drive the backend state of rooms.
- **React, TypeScript, WebSockets**

JEngine2D (2020)
- Created a 2D game engine mostly for myself for use in Ludum Dare game jams.
- Supports OpenGL 3+ for rendering.
- Includes features like sprite sheets, font rendering, and audio playback.
- **C++, OpenGL 3**

You can find the rest of my portfolio here.