ASHTON FOLEY

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Education

University of Michigan — **September 2022 – December 2025**
Bachelor of Science in Engineering for Computer Science (GPA: 3.9) — *Ann Arbor, MI*

Activities: Michigan Hackers Open Source Development Team Lead
Relevant Coursework: Web Systems, Database Management Systems, Computer Networks, Theory of Computer Science, Computer Organization, Data Structures and Algorithms, Differential Equations, Linear Algebra

Work Experience

United Wholesale Mortgage — **May 2024 - August 2024**
DevOps Engineer Intern — *Pontiac, MI*

- Designed and implemented a .NET microservice integrated with Bitbucket's API, facilitating the collection and transmission of millions of data entries to a SQL Server database, enhancing data availability and analysis capabilities.
- Employed the Xunit testing framework to thoroughly test application endpoints, providing a reusable, efficient method for verifying application integrity.
- Utilized the Orkes conductor to orchestrate API calls on a set schedule to automate production runtimes.
- Developed a PowerShell script consumed by the Octopus pipeline, automating the removal of testing databases during deployment workflows, reducing unnecessary storage overhead.
- Streamlined several Jenkins build pipelines by refactoring outdated steps, resulting in cleaner and more efficient code.
- Contributed effectively to several Agile teams, utilizing Jira for task management and progress tracking, ensuring alignment with project timelines and delivering comprehensive weekly progress reports.

Michigan Hackers — **January 2024 - Present**
Open Source Development Team Lead — *Ann Arbor, MI*

- Educated students on key open source principles and Git fundamentals through structured presentations.
- Conducted code reviews across a range of open source projects, facilitating discussions on ideas and sharing optimization strategies to improve code quality.
- Led weekly development meetings to guide team efforts in creating and maintaining a web application built on the Node.js ecosystem, providing an enhanced service for Spotify users.

Projects

iPerf Clone CLI Application | *C/C++* — **September 2024**

- Created a Linux network monitoring command line C/C++ tool using the sys/socket.h library to measure TCP bandwidth between client-server connections.
- Validated application functionality using Mininet to simulate performance against several network topologies.

Spotify Shared Queue Platform | *Typescript, PostgreSQL, Next.js, React, Docker* — **February 2024 - April 2024**

- Led the development of a Next.js web application integrated with Spotify's API, enabling users to securely share access to their music queue through trusted sessions.
- Implemented a complex application architecture involving REST APIs and Websockets to orchestrate session management and engineer data pipelines.
- Utilized the React framework to maintain a seamless user experience, crafting reusable components to efficiently interact with backend systems and simplify user experience.
- Developed a shell script to automate PostgreSQL database setup from within a Docker container, expediting the development process.

Slide-n-stack.com | *JavaScript, HTML, CSS, MySQL, Express, AWS* — **May 2023 – August 2023**

- Built and deployed a full stack arcade-style game to the web using a combination of front-end (HTML, CSS, JavaScript), back end (Node.js, Express, MySQL), and infrastructure (AWS) technologies.
- Developed a user authentication portal and Express backend authentication service to maintain user accounts.
- Leveraged AWS EC2 to orchestrate cloud deployment of the Node.js application and its MySQL server.

Programming Languages, Technologies, and Skills

Languages: C/C++, JavaScript/TypeScript, C#, HTML/CSS, SQL, Matlab
Technologies/Frameworks: AWS, React, Linux, Git, Node.js, Docker, Jira, Bitbucket, Jenkins, .NET
Skills: Full Stack Development, CI/CD, Socket Programming, Database Design, OOP, Cloud Computing, Agile