

Natalie Bridgers

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ABOUT

Recent graduate with a B.S. in Computer Science, specializing in software development. Proficient in Rust and TypeScript. Interested in open-source projects, video streaming/music technology, and the Web.

EDUCATION

Middle Tennessee State University

Bachelor of Science in Computer Science

Murfreesboro, TN

Aug. 2020 – May 2024

Highlighted Coursework - Java, Intro to Artificial Intelligence, Neural Networks, Algorithms and Data Structures, Operating Systems, Software Engineering, Theory of Programming Languages, Computer Architecture

NOTABLE PROJECTS

Muse | *Rust, Tokio, FFmpeg, Next.js, TypeScript, React, Docker, PostgreSQL, API* [Website](#) - [GitHub Repo](#)

- Developed a local music platform enabling real-time streaming, lyrics viewing, and intuitive library navigation, aimed at enhancing users' personal music management and discovery
- Implemented OAuth2 with an external OIDC server, with PKCE code exchange flow and device auth flow
- Integrated APIs from Spotify and LastFM to enrich user experience with music metadata and song tracking
- Contributed to substantial full-stack development and API design experience, streamlining development workflows and boosting overall system efficiency

Capybara Panel | *Kotlin, Ktor, Go, Next.js, TypeScript, React, Docker, PostgreSQL*

[GitHub Repo](#)

- Contributed to the development of a container management platform as part of a Databases course project
- Implemented API endpoints for creating, managing, and monitoring Docker containers via a Go-based worker
- Designed a user-friendly frontend with Next.js, React, and TypeScript, providing real-time container creation, monitoring, and control
- Collaborated with a teammate who implemented the controller, integrating PostgreSQL for metadata persistence

Bluesky User Counter | *TypeScript, Deno, React, Next.js*

[Website](#) - [GitHub Repo](#)

- Developed a web application to track and display real-time user statistics for Bluesky, a new social platform.
- Achieved recognition with the project being [featured on ZDNet](#), highlighting the real-time nature.
- Improved server performance by 75% through `useState` and `useEffect` cleanup, reducing API calls and rerenders.
- Implemented randomized request offsets on the client to more evenly distribute server load and mitigate bottlenecks during high traffic.

EXPERIENCE

Salesfloor, TA

Walmart

Feb 2021 – Sep 2024

Murfreesboro, TN

- Delivered excellent customer service by addressing inquiries, leading to improved customer satisfaction
- Collaborated with team members to optimize inventory management, resulting in reduced stock discrepancies

Discord Bot Developer (Recieved Grant)

Audius

Dec 2019 – May 2020

- Received a grant to further develop a Discord music bot, improving user engagement during listening parties
- Integrated with Audius APIs to fetch and stream music, without an official SDK
- Implemented user commands for personalized music experiences and community engagement

TECHNICAL SKILLS

Languages: C/C++, Rust, TypeScript, JavaScript, Python, Go, Swift, HTML/CSS, SQL, Bash, Java, C#

Frameworks & Libraries: React, Next.js, Svelte, FastAPI, Tokio, TensorFlow, Keras, NumPy, Matplotlib, FFmpeg, PostgreSQL, ClickHouse, SQLite, LibSQL

Developer Tools: Git, Docker, Kubernetes, Zed, VS Code, Sublime Text, Jupyter, Xcode, Vim

Concepts: Data Structures, Algorithms, Machine Learning, Neural Networks, Networking, Systems Programming, Compiler Design, Functional Programming