Zach Hamilton Software Engineer

zachmhamilton@outlook.com | +1 513-649-5423

TECHNICAL SKILLS

Languages JavaScript | TypeScript | SQL | Java

Technologies React | Node | Express | AWS SDK | PostgreSQL | MongoDB | Redux | Git | Jest | HTML | CSS | JWT

EXPERIENCE

Software Engineer | LambdaPeeler (Open Source)

AWS Lambda Management Tool

- Collaborated with a team of talented software engineers to develop an open-source AWS Lambda management tool, with a focus on enhancing Lambda Layers management and developer efficiency
- Integrated AWS SDK v3 for its ability to facilitate seamless interaction with AWS, empowering users to manage their layers more effectively, contributing to faster development and testing cycles
- Implemented React's reusable component architecture in conjunction with React Router to create a SPA to boost loading performance and minimize server calls, ensuring a seamless user experience
- Modernized the codebase with TypeScript, adding strong and static typing to reduce the occurrence of silent errors, to enhance code quality and elevate maintainability over vanilla JavaScript
- Architected Express backend for its single threaded event loop to facilitate the chaining of modularized middleware to streamline backend data flow, using JWTs to securely handle authenticated sessions and Bcrypt to verify password information
- Reinforced reliability by applying comprehensive unit testing through Jest for it's speed and parallelization, ensuring proper middleware and database functionality, and early detection of unwanted side effects
- Enhanced the UI with Material UI components for consistent theme and styling, creating a user-centric interface that not only enhanced usability but also contributed to a visually appealing and engaging experience for users
- Developed and maintained under tech accelerator OSLabs

Teaching Assistant | The Ohio State University

Java Programming

- Demonstrated proficiency in Java fundamentals during lab sessions, aiding engineering students in fostering a deeper understanding of coding concepts, such as Object-Oriented programming and basic data structures and algorithms
- Led frequent code reviews, delivering targeted feedback to 50+ engineering students, enhancing coding skills and assignment performance by providing valuable insights
- Collaborated with faculty and instructors to assess and provide constructive feedback on assignments, projects, and homework, improving student coding skills and project outcomes

OPEN SOURCE

Software Engineer | AlgoArchive

Algorithm Study Tracker

- Built an ACID-compliant PostgreSQL database allowing secure concurrent access and updating of algorithm data, guaranteeing data accuracy across multiple tables
- Architected RESTful API endpoints utilizing a Node.js/Express server with lightweight middleware which orchestrated the routing of all user data between client-side application and the PostgreSQL database, leveraging Express' lightweight design and increased development speed
- Designed and implemented a robust filtering feature, harnessing PostgreSQL's complex querying capabilities, to optimize data retrieval and allow users to efficiently manage their algorithm problems

Software Engineer | Shelved

Digital Library

- Built a Single Page Application with React, leveraging reusable stateful and stateless components, enabling a rich front-end UI, rendering application status and data with individual components reactively updating state throughout the application
- Implemented MongoDB as the database technology, utilizing its document-based structure and querying capabilities to efficiently store and retrieve digital library content, enhancing performance and reactivity, ensuring a user-friendly digital library experience
- Incorporated the Google Books API to seamlessly retrieve and display comprehensive book data for users' personal libraries based on user input of title and author, enhancing the user experience

EDUCATION

Bachelor of Science | Neuroscience

The Ohio State University

PUBLICATIONS/TALKS

Lambda Peeler: Streamlining AWS Lambda Management

Medium.com
React Hooks

Tech Talks: Sponsored by Remake Labs

2023

2022