

Allison Embrey Software Engineer

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PROFILE


As a software engineer, I enjoy thoroughly understanding the systems that I work with. I care deeply about the quality of the software I write, and I love to help enhance the productivity of my fellow developers by finding and solving the headaches that slow my teammates down.

TECHNICAL EXPERIENCE

Software Engineer & Co-Creator, Open-Source Project  2024 – present

DataLoaf is an open-source, self-hosted product analytics platform.

- Automated the setup and teardown of more than 50 AWS resources via CLI tool, reducing deployment to 4 steps
- Engineered a server-side SDK in Node.js to capture custom event and user data from client applications
- Built a full-stack data visualization application, displaying common analytics aggregations against collected data
- Produced a TypeScript back-end service to efficiently query and process event data through a REST API
- Deployed back-end services on EC2 instances using Docker and served the front-end through a containerized Nginx
- Designed and implemented an ETL pipeline using AWS, capable of ingesting and storing up to 10,000 events per second
- Enhanced back-end code readability by refactoring approximately 1,000 lines of code down to around 200
- Authored technical case study of DataLoaf's problem domain, exploring key engineering decisions and their tradeoffs

The case study can be read at: data-loaf.com 

Software Engineer, deeproot Pinball 2018 – 2020

deeproot aimed to create affordable full-scale pinball machines for family homes.

- Translated thousands of game rules into event-driven code using an in-house framework, written in Go
- Authored new game features, including a rule set for game modes and a boss fight sequence
- Developed abstraction layer to refactor large codebase, standardizing common patterns and reducing game size by 30%
- Integrated game software with playfield hardware by building power and communication systems for prototype games
- Diagnosed and resolved bugs, using holistic understanding to determine whether they originated in hardware or software
- Monitored games on-site at a major pinball convention, debugging issues real-time in a live environment
- Sole software developer for 1 year, collaborating with external partners to extend the framework used for game development
- Managed a team of five, overseeing rule set coding, front-end development, and design coordination

SKILLS

Languages

TypeScript/JavaScript, Go, Java, C/C++

Back-End

Node.js, Express, PostgreSQL, MongoDB

Cloud

AWS (API Gateway, Lambda, Data Streams, Firehose, Simple Storage Service (S3), Redshift), Digital Ocean Droplets

Other

Git/GitHub, Linux, Bash, Nginx, Terraform, Docker, Jest, REST APIs, object-oriented programming, functional programming

EDUCATION

University of Texas at San Antonio 2008 – 2014

Minor in Computer Science, Bachelor of Science in Mechanical Engineering