

# Allison Embrey Software Engineer

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## PROFESSIONAL SUMMARY


As a full-stack software engineer, I'm able to simplify complex problems by breaking them down into actionable steps. I'm familiar with various programming languages and have hands-on experience with AWS cloud technologies. I'm the kind of engineer who enjoys digging into the details and finding solutions that make everyone's job easier.

## PROFESSIONAL EXPERIENCE

### Software Engineer & Co-Creator, *DataLoaf*

Jan 2024 – present

DataLoaf is an open-source, self-hosted product analytics solution for small-medium teams.

- Published a server-side SDK for data capture from any **Node.js** backend. This npm package simplifies implementation by providing developers with a simple API. It **eliminates the need for custom code** to send data to the ingestion pipeline.
- Developed a **TypeScript** backend query service and a **React** frontend dashboard for data visualization. This lets users generate time series charts to see how people are using their application.
- Used **Terraform** and **Go** to make a CLI tool to automate the setup and teardown of AWS infrastructure. It deploys 50+ resources with one command.
- Piloted a data ingestion pipeline from ideation to implementation, using **AWS Kinesis Data Streams** to scale input capacity to at least **500,000 events per second**.
- Initiated a backend refactor that combined several hundred lines of copy-paste code across modules. This **reduced code size by 60%** and included a restructure that improved the system's extensibility.
- Led the development of a technical case study that covers DataLoaf's development journey. It highlights the final architecture and **key design tradeoffs** the team considered along the way. The case study can be read at: **data-loaf.com** 

### Software Engineer, *deeproot Pinball*

Oct 2018 – Oct 2020

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

- Implemented extensive rulesets for pinball machines in **Go** with a proprietary framework. This event-driven code handled everything from simple scoring to complex multi-stage gameplay.
- Created an API to simplify the implementation of common ruleset elements. This not only allowed developers to focus more on game-specific elements, it also **shortened development time by an average of two weeks per project**.
- Led a refactoring effort to organize related gameplay elements into separate modes. This allowed us to **start automated unit testing** because it enabled event listeners to be managed as sets and facilitated state resets for each test.

## SKILLS

**Languages:** JavaScript/TypeScript, Go, SQL, Java, Clojure

**Full-Stack:** Node.js, Express, React, Postgres, MongoDB, REST

**Cloud/Infra:** Docker, Nginx, Terraform, AWS (API Gateway, Lambda, Data Streams, Firehose, S3, Redshift)

**Other:** Git/GitHub, Bash/Linux, HTTP, TLS, TCP, UDP, Jest, OOP, functional programming

## EDUCATION

### Launch School

2021 – 2024

*Multi-year online program focused on Software Engineering fundamentals*

### University of Texas at San Antonio

2008 – 2014

*Minor in Computer Science, B.S. in Mechanical Engineering*