# Jerred Shepherd

https://sjer.red

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## EDUCATION

- **Georgia Institute of Technology**   Atlanta, GA
  *Master of Science in Computer Science*   *August 2022 – Present*

- **Harding University**   Searcy, AR
  *Bachelor of Science in Software Development*   *August 2015 – May 2019*

## EXPERIENCE

- **Pinterest**   Seattle, WA
  *Software Engineer II*   *September 2024 - Present*
  - **Onboarded**: I just started, so not much to say :)

- **Posit Software**   Remote
  *Software Engineer*   *September 2021 - June 2024*
  - **Frontend redesign**: Led a UI redesign focusing on the first-use experience and increasing accessibility. This aligned with our business's goal of making the product more approachable to new users.
  - **Frontend rewrite**: Led a successful rewrite of Package Manager's frontend to Vue 3 & TypeScript. Eliminated 70% of dependencies and reduced bundle size by 90%.
  - **Automated testing framework**: Identified that the product was difficult to test. Gained the team's support to design and implement a containerized testing framework. The framework allowed for any aspect of the product to be tested locally in isolation which allowed the team to move faster and with more confidence.
  - **Developer UX**: Identified deficiencies in developer workflows and tooling. Collaborated with the team to shorten feedback loops by speeding up CI and improving development environments. Set up automated linters, formatters, and dependency updates.
  - **macOS cross-compiler**: Identified that the team's proposed approach for compiling for macOS would be expensive to implement and maintain. Created a proof-of-concept macOS cross-compiler toolchain by adapting existing open-source projects to target arm64 macOS with Kubernetes. Guided team members who brought the proof-of-concept into production. The approach allowed the team to quickly reach our goal of building R packages (which contain C, C++, Fortran, and Rust code) for macOS.
  - **Backend**: Implemented features for the product's Go backend. Migrated the backend to a portable static binary which reduced the testing burden and the complexity of distributing the product.

- **Amazon Web Services**   Seattle, WA
  *Software Development Engineer*   *July 2019 - August 2021*
  - **Process automation**: Identified manual, error-prone, and time-consuming processes for that could be automated. Gathered support the team's support to implement a tool that automatically root causes issues using metrics and application logs. Time to complete these tasks was reduced from about 4 hours per week to minutes.
  - **Mentorship**: Mentored an intern who was hired full-time. Guided technical and non-technical skills. Mentored peers to improve their technical skills.
  - **Operations**: Participated on the on-call rotation for a service that managed tens of millions of AWS EC2 instances and received thousands of requests per second. Responded to, root-caused, and triaged incidents. Responded to customer issues and worked with them to resolve their problems.
  - **Backend**: Implemented features in Java using a distributed state machine with DynamoDB, SQS, Lambda, and S3. Optimized fleet configuration which led to a 66% reduction in server hardware costs.
  - **Frontend**: Implemented frontend for a new AWS service using React and TypeScript.

## SKILLS

Go, TypeScript, Kubernetes, Docker, AWS, React, Vue, Java, Linux, Git, SQL, Bash, Python

## PROJECTS

- **Compiler**: Implemented a compiler from scratch for the Tiger language targeting MIPS assembly.
- **Paxos**: Implemented the Paxos consensus algorithm from scratch.
- **Game Engine**: A cross-platform game using OpenGL.
- **Kubernetes Homelab**: A k3s cluster running on hardware at my home. Managed with cdk8s and ArgoCD.