Hayden Hargreaves

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Education

Embry-Riddle Aeronautical University May 2028

BS Software Engineering. President of IEEE & HKN, Member of Tau Beta Pi GPA: 4.0

Relevant Coursework: Computer Science I/II, File and Database Systems, Data Structures and Algorithms, Software Principles, Software Construction, Operating Systems

Technical Skills

Languages: Go, C#, Python, SQL, Javascript/NodeJS, Java, Bash/Shell
Backend & Systems: Microservices, Distributed Systems, REST APIs, PostgreSQL, RabbitMQ, Concurrency, .NET
Platform & Infra: Linux, Docker, IaC (Ansible), CI/CD (GitHub Actions, Azure DevOps), Cloudflare, Networking

Experience

Cloud Backend Engineering Intern May 2026 – Aug. 2026

Garmin International Olathe, KS

- Optimized chart plotter map delivery by implementing selective subregion downloads, reducing product size, bandwidth and memory requirements for customers.
- Designed a centralized testing and mocking tool for a major system upgrade, helping engineers test code faster and with less friction.
- Implemented a hybrid proxy service that conditionally routes requests to live environments or intercepts them to serve known mock data, enabling reliable and isolated component testing.
- Updated CI/CD pipelines with automated resource cleanup scripts to prevent infrastructure bloat and reduce cloud operating costs.

Software Engineer Mar. 2025 – Present

Poppin' Jobs

- Fixed performance issues in the search engine by replacing per-job database queries with a single bulk query, reducing dozens of database hits per job to one and significantly improving response times for large search results.
- Built and launched an AI-powered resume tool from scratch, working directly with users to shape the features and overall workflow.
- Pitched a technical proposal and roadmap to modernize CI/CD infrastructure, transitioning from manual deployments to an automated pipeline leveraging Azure DevOps services with testing and containerization.
- Implemented comprehensive unit and integration testing suites across backend services, ensuring pipeline stability during rapid feature deployments.

Project Experience

Self-Hosted Cloud Infrastructure | *Linux, Docker, GitHub Actions, RabbitMQ, Ansible, Go, SQL* 2024 – 2027

- Built a Linux server environment using Docker Compose, isolating PostgreSQL and RabbitMQ onto a private network to keep sensitive backend services away from public web traffic.
- Replaced manual SSH deployments by writing GitHub Actions workflows that automatically build and push Docker images to a self-hosted private Gitea registry whenever code is committed, triggering automated deployments.
- Maintain 24/7 uptime for over a dozen self-hosted applications that drive daily workflows, such as personal cloud storage, password vaults, financial trackers, notes and more.
- Configure reverse proxies, storage volumes, and automated backup routines to ensure data persistence and secure external access across all personal web services and NAS file systems.

Gim - Terminal Text Editor | *Go, BubbleTea, Treesitter, GitHub Actions* 2025 – 2026

- Developed a vim-like terminal text editor in Go using the Elm Architecture (BubbleTea), implementing a clean Model-Update-View pattern for predictable state management and testability.
- Designed a finite state machine to parse vim's composable command grammar, supporting count prefixes, operator-motion composition and text objects.
- Integrated syntax highlighting with a Treesitter engine powered by grammars and queries.
- Implemented a multi-buffer editing system separating content from presentation, supporting buffer navigation, dirty-state tracking and lazy loading for efficient memory usage.