

Jonas Groening

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[Portfolio](#) [LinkedIn](#) [Github](#)

Education

University of Michigan , Ann Arbor	April 2026
B.S.E, Computer Science	4.0
Coursework: Prog. and Intro Data Structures, Discrete Math, Linear Algebra	

Experience

CriTech Research, Inc , Saline, MI	May 2023 - August 2023
Software Engineering Intern	

- Create software with OpenCV and Python to combine x-ray images into a 3-dimensional model, allowing medical professionals to analyze bone anomalies
- Develop a CI/CD pipeline using Jenkins to automate unit and black-box testing saving ~5 hours per week
- Extend and refactor a C# .NET backend to create a more robust API with fewer vulnerabilities
- Develop and execute test procedures to ensure the safety and quality of medical software, aiding in the process of ISO certification

Quarry Videos , Ann Arbor, MI	April 2023 - August 2023
Self-Employed	

- Build an interactive fullstack website with Next.js, React, and Tailwind, amassing hundreds of users
- Develop and host a centralized logging service with Go and jQuery, allowing the team to find 40% more bugs monthly
- Utilize RabbitMQ to build a task system for computationally intensive work, allowing the API to become 90% more responsive
- Use Jenkins, Terraform, and Docker to set up a CI/CD pipeline that saves ~30 minutes per deployment
- Write a custom Prisma adapter for MongoDB that improves session data retrieval times by 500%

Technologies and Skills

Languages: Go, Python, Rust, Typescript, C#, C++, Java, SQL, Javascript

Web Frameworks: NextJS, React, Django, .NET, Flask, Fiber

Databases: MySQL, MongoDB, Redis

Misc: Git, Linux, NumPy, Docker, Terraform, OpenCV, Jenkins, Pandas, GraphQL

Projects

EmbedChain , Open Source Contributor	July 2023 - August 2023
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- Add support to create multiple AI “brains” using different vector database collections, resolving 3 github issues
- Contribute extensive unit tests using Pytest and mocking, increasing unit test coverage by 15%
- Prevent reset function from destroying App instance improving user ergonomics

QLogger	June 2023 - July 2023
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- Centralized logging service built with Golang and Fiber with an interactive Svelte frontend to view, filter, and aggregate logs
- Containerize the application with Docker to simplify self-hosting

QuickPipes	March 2023 - April 2023
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- Rewrite a terminal screensaver in Rust that runs at 10% cpu usage compared to the original, pipes.sh

N-Body	March 2022 - April 2022
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- Explore n-body simulations efficiently using a custom implemented Quad-tree, written in Rust
- Benchmark extensively with Criterion crate, striving for optimal code