# Jonas Groening

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## Education

**University of Michigan** Ann Arbor, MI
*Bachelor of Science in Engineering in Computer Science* *May 2026*
**Relevant Coursework**: Prog. and Intro Data Structures, Discrete Math, Linear Algebra, Multivariable Calculus

## Technical Skills

**Languages**: Python, Golang, Javascript, Typescript, C#, C++, Rust, SQL, Java, Bash
**Frameworks**: NextJS, React, Django, .NET, Flask, NumPy
**Developer Tools**: Git, Linux, Docker, Terraform, Jenkins, Pandas, GraphQL, MySQL, MongoDB, Redis, Postman

## Experience

**Software Engineer Intern** May 2023 – August 2023
*CriTech Research, Inc* *Saline, MI*

- Implemented a **Flask** API with OpenCV and **Python** to combine x-ray images into a 3-dimensional model, enabling medical professionals to analyze bone anomalies
- Developed a CI/CD pipeline using **Jenkins** to automate unit and black-box testing saving 5 hours per week
- Maintained a **.NET** backend by resolving bugs using Jira and optimizing performance, accommodating a 12% growth in user interactions
- Devised 3 new endpoints using **C#**, reducing unnecessary API requests and enhancing responsiveness

**Software Engineer Intern** January 2023 – May 2023
*Quarry Video* *Ann Arbor, MI*

- Architected an internal tool with **Next.js**, providing real-time data visualization and contributing to an increase in task efficiency
- Programmed a centralized logging service with **Go**, **Typescript**, and **Svelte**, allowing the team to find 35% more anomalies monthly
- Utilized **RabbitMQ** and **Celery** to build a task system for computationally intensive work, enabling the API to become more responsive
- Automated deployment with a CI/CD pipeline built with **Jenkins**, **Terraform**, and **Docker**, saving 30 minutes each deployment cycle
- Created a custom **Prisma** adapter for **MongoDB** that improved session data retrieval times by over 5 seconds

## Projects

**Embedchain** | *Open Source Contributor* July 2023 – Present

- Add **Python** support to create multiple AI "brains" using **ChromaDB** collections, resolving 3 github issues
- Contribute extensive unit tests with **PyTest** increasing test coverage by 15%
- Improve API ergonomics by writing a comprehensive database reset function
- Extended app functionality using **TypeScript**, empowering users to define their preferred GPT model

**Hazard Detector** January 2023

- Developed and implemented an embedded **C++** solution on an **Arduino** platform to accurately detect and monitor temperature and noise levels in real-time
- Designed and established a robust **Flask** API to receive critical warning requests from the **Arduino** in real-time
- Leveraged the **Twilio Python** API integration to promptly notify users via SMS alerts

## Leadership

**Michigan Hackers** September 2022 – December 2022
*Project Lead* *Ann Arbor, MI*

- Successfully oversaw a team of 4 developers resulting in timely project milestones and enhanced collaboration
- Developed a Chrome browser extension with **Javascript**, CSS, and HTML, ensuring seamless functionality
- Engineered a **Python** backend using the **Flask** framework that converted incoming text into a concept map using a pre-trained summarization model