

Jonas Groening

(734) 646-3921 jonasg@umich.edu

jonasiwnl.github.io | linkedin.com/in/jonasgroening | github.com/jonasiwnl

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, Statistical Analysis, Multivariable Calculus

Experience

CriTech Research, Inc, Saline, MI

May 2023 - August 2023

Software Engineering Intern - Backend

- 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 by **17%** and enhancing responsiveness

Quarry Videos, Ann Arbor, MI

January 2023 - May 2023

Software Engineering Intern - Fullstack

- Architected an internal tool with **Next.js**, providing real-time data visualization and contributing to a **25%** increase in task efficiency
- Programmed a centralized logging service with **Go** and **Svelte**, allowing the team to find **34%** more bugs 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**

Technical Skills

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

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

Tools: Git, Linux, NumPy, Docker, Terraform, OpenCV, Jenkins, Pandas, GraphQL, MySQL, MongoDB, Redis

Projects

EmbedChain

July 2023 - Present

Open Source Contributor

- Add **Python** support to create multiple AI “brains” using **vector database** 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

Best Use of Twilio, SpartaHack 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 **Twilio API** integration to promptly notify users via SMS alerts

Leadership

AI Club

September 2022 - December 2022

Project Lead

- Successfully led 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