Jonas Groening

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EDUCATION

University of Michigan, Ann Arbor — Aug 2022 - May 2026
B.S.E, Computer Science — *Ann Arbor, MI*
GPA: 4.00 | **Activities**: Michigan Venture Club, V1 @ Michigan, UM Autonomous Robotic Vehicle
Coursework: Data Structures & Algorithms, Distributed Systems, Web Systems, Computer Architecture, Analysis of Algorithms, Technical Communication, Linear Algebra, Discrete Math

EXPERIENCE

Glean — May 2025 – Aug 2025
Incoming Software Engineer Intern — *Palo Alto, CA*

Courier Health — Sep 2024 – Nov 2024
Software Engineer Intern - Data Platform — *New York City, NY*
- Engineered a metrics collection system for the data ingestion pipeline processing 100+ files daily using TypeScript, tracking completion time, success rate, data integrity, and other information in PostgreSQL.
- Deployed a GraphQL API as an AWS Lambda for metrics retrieval and visualized using React, providing critical pipeline observability and diagnostics, bringing failure investigation time from 5+ minutes down to <60 seconds.
- Developed an algorithm to recursively fetch and visualize field-level modification histories of objects in AWS DynamoDB, enabling engineers and customer support to track granular changes in patient data.
- Organized stakeholder meetings, gathered requirements, and created design proposals, driving product iteration.

Vectra AI — May 2024 – Aug 2024
Software Engineer Intern - Distributed Compute — *Austin, TX*
- Piloted scalable event-driven architecture for high workload tasks with Python and Celery, cutting AWS costs by 25%, halving CPU and memory allocation, and eliminating the need for 13 Kubernetes cronjob deployments.
- Minimized concurrent Celery broker and backend connections by optimizing pool sizes, lowering memory footprint by 34% for Redis, 10% for MariaDB, and driving down cloud compute costs.
- Leveraged Terraform to orchestrate S3 Access Point integrations and visualized time-series bucket usage data through Grafana, providing process-level cost observability and identifying areas for expense reduction.

CriTech Research — May 2023 – Aug 2023
Software Engineer Intern - Analytics Engine — *Saline, MI*
- Shipped redesigned endpoints for a medical patient portal using C# and .NET Core, removing unnecessary MySQL queries and accommodating a 10% growth in compliance data requests.
- Optimized API reliability by adding 100% coverage tests (unit, integration, blackbox) to a CI pipeline, saving ~2 hours of manual testing weekly and providing high service availability.

PROJECTS

quarry.video | *NextJS, Python, Django, Go, Terraform, MongoDB*
- Architected a full-stack application with NextJS, Django, MongoDB, and Prisma, providing a robust in-browser interface for short-form content generation, video editing, and data visualization.
- Leveraged Python to build a reliable FFmpeg wrapper for the video processing pipeline.
- Gathered feedback and feature requests from users, held engineering meetings, and guided product direction.

Distributed Key-Value Store | *Go, Networking, Concurrency*
- Built a fault-tolerant and highly available key-value store using Paxos for replication and sharding for scalability.

Beehive | *C++, FFmpeg, Multithreading* | Source Code
- Engineered a cross-platform screen recording and streaming tool using C++, leveraging FFmpeg to encode and push video to an RTSP server in real-time (60+ frames per second) or write to disk in multiple formats.

SKILLS

Languages: Python, Go, TypeScript, JavaScript, C++, SQL
Technologies: Linux, Git, Docker, Terraform, Kubernetes, FFmpeg, Django, Flask, NextJS, GraphQL
Databases: PostgreSQL, MariaDB, DynamoDB, MongoDB
Interests: Soccer, Personal Finance, Traveling, Hiking, Cats, Lifting