

# Gagan Sapkota

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## PROFILE

I am a software engineer with a background in mathematics and philosophy. I am a motivated self-starter and a selfless team player, with two years of experience working in JavaScript and Ruby ecosystems. Recently, I built Skopos: a cloud-based monitoring tool for testing multi-step API workflows.

## EXPERIENCE

### Software Engineer, Co-Creator

2022 – 2023

**Skopos** 🌐 <https://skopos-api-monitoring.github.io/>

Skopos is an open-source API monitoring tool for testing multi-step API workflows in sequence and independent workflows in parallel, built using Node.js, PostgreSQL, and AWS services (S3, ECS, EC2, Event Bridge, Lambda, and SNS)

- Designed the data model optimized for read-heavy access patterns, implemented the schema with Prisma for efficient data migrations, and added indexes to speed up queries (Typescript, Prisma, PostgreSQL)
- Developed and unit-tested the core logic for testing multi-step API workflows and implemented it with a state machine (Node.js, Express, Xstate)
- Containerized application and horizontally scaled it using AWS load balancer to enable parallel execution resulting in 10 times faster execution of the tests (Docker, ECS, EC2)
- Automated cloud deployment to create and configure 11 constructs on AWS using Cloud Development Kit infrastructure as code (VPC, ECS, EC2, Load Balancer, RDS, EventBridge, SNS, Lambda)
- Engineered the scheduling functionality using Event Bridge and the notification functionality using SNS to integrate with and decouple from the backend logic (SDK, EventBridge, Lambda, SNS)
- Crafted GraphQL queries and custom react hooks leading to the design of intuitive UI (GraphQL, React)
- Authored and presented a comprehensive case study 🌐 on the design decisions encountered while creating Skopos and the problems it solves

### Software Engineer, Open Source Projects

2020 – 2022

Completed a mastery based online program focused on the fundamentals of software engineering while building projects on the side

- Designed and developed **WireSnoop**, a RequestBin clone for receiving and debugging webhooks. Utilized Nginx, Node.js, PostgreSQL, MongoDB and React
- Built **Ergo**, a task manager built with scalability in mind. Built using Ruby, Sinatra, PostgreSQL, and JQuery

### Philosophy Instructor

2017 – 2021

University of Colorado, Boulder

- Advocated for a novel Global philosophy to diversify the Philosophy curriculum, got approved, and finally designed and implemented the course
- Successfully taught courses on formal reasoning and writing, improving students' abilities to reason about and articulate abstract problems
- Collaborated with colleagues to improve teaching by conducting peer review of teaching session and exchanging feedback on teaching strategies

## SKILLS

### Backend

Node.js, TypeScript, Ruby, Python, Go, PostgreSQL, MongoDB, Apollo, GraphQL, Express, Xstate, Mongoose, Gin

### Frontend

JavaScript, React/Redux, HTML/CSS, GraphQL, JQuery

### Tooling

Git, Github, Docker, Heroku, DigitalOcean, AWS Services (ECS, EC2, Event Bridge, SNS), CI/CD

## EDUCATION

**PhD in Philosophy**, *University of Colorado, Boulder*

2016 – 2022

**MA in Philosophy**, *Georgia State University*

2013 – 2016

**BS in Maths and Philosophy**, *Saint Peter's University*

2008 – 2012