

ROHAN RAVINDRAN

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EXPERIENCE

Software Engineer Intern

Kikoff 📅 Jan 2025 - Apr 2025 (San Francisco)

- Built an **account reactivation system** using **Rails & Flutter**, driving a **58% boost** in returning subscribers & cutting support requests **22%**
- Built a system for **OFAC screening** with **OpenSanctions** using **Rails & Sidekiq**, including scoring user PII to sanctions list, generating alerts, and case-management workflows, saving **~\$750K/year**
- Optimized **network call latency** in **Rails** by moving non-essential network calls out of **database locks/transactions** via **after-commit callbacks**, reducing **lock durations** and minimizing **rollback failures**
- Created a **Rails & Flutter** survey framework with **nested questions**, **randomized options**, **multi/single-select**, and **A/B testing**, enabling configurable in-app surveys and analytics

Software Engineer Intern

Newfront (YC W18) 📅 May 2024 - Aug 2024 (San Francisco)

- Optimized app performance by implementing **virtualization** and **debounced search** for multiple critical components using **Typescript** and **React**, resulting in a **~40% reduction** in load time
- Engineered an underwriter quote cloning system with **NestJS** and **AWS SNS/SQS**, implementing event-driven **async file replication**, streamlining workflows for **400+** producers
- Implemented **distributed error tracing** for the **event outbox** system using **Typescript** and **Datadog**, improving system observability and debugging efficiency

Software Engineer Intern

Empire 📅 May 2023 - Aug 2023

- Created a deployment workflow utilizing **GitHub Actions** and **GCP** to **automate production and feature branch deployments**, achieving a **~40% reduction** in deployment times
- Engineered a voting system for technology proposals using **Python** and **Firebase**, leveraging **hashed IDs** and an optimized database schema with **denormalization** to **minimize database queries**

Backend Engineer Intern

Shopify 📅 Sep 2022 - Dec 2022

- Added **automated end-to-end tests** to the **CI** pipeline with **Cypress** and **Typescript**, automating the process of smoke testing dependency upgrades leading to a **~60% reduction** in testing times
- Engineered a **parallelized system of jobs** using **Ruby on Rails** and **Sidekiq** to automate involuntary employee exits, simplifying workflows for **100+ agents**
- Built an internal service approval tracker feature for untrusted apps using **React** and **Typescript**, enhancing approval process transparency for over **8,000 employees**

Backend Engineer Intern

Shopify 📅 Jan 2022 - Apr 2022

- Built a **service proposal dashboard** using **Rails**, **GraphQL**, and **React**, offering actionable voting insight across **3000+ services**
- Created a user access control dashboard using **Ruby**, **GraphQL**, and **React**, leading to a **~90% reduction** in user registration times
- Implemented a **session expiry notification** feature for users submitting internal service proposals using **Ruby on Rails** and **custom React hooks**, reducing support time

Frontend Developer

Hack the North 📅 Mar 2022 - Mar 2023

- Built multiple **responsive**, **accessible**, and **performant** web apps using **React**, **Tailwind**, and **GraphQL**, attracting **~250 K visitors**

EDUCATION

Honours Bachelor of Computer Science (4A)

University of Waterloo 📅 2020 - 2025

- Recipient of the President's Scholarship of Distinction

TECHNICAL SKILLS

Languages

- Typescript, Javascript, Python, Ruby, C, C++, Java

Platforms and Technologies

- React, NodeJS, Rails, SQL, NoSQL (Mongo, Redis), GraphQL, Tailwind, NextJS, NestJS, FastAPI, REST APIs

PROJECTS / OPEN SOURCE

Open Source Developer

- Modified the React-Bootstrap docs site with updated descriptions and interactive examples that explain the global 'as' prop (**~2M Weekly Downloads**)
- Updated the Semantic UI search component with a text placeholder feature (**~250k Weekly Downloads**)

Flow (Python, FastAPI, GraphQL, React, Postgres)

- Developing **Flow**, a personalized AI assistant that ingests user data from **multiple platforms**, enabling **LLM-powered chat** based on a user's personal information
- Implemented a sophisticated **RAG** system including intelligent retrieval with **hybrid vector search**, **Cohere re-ranking**, and an AI-driven chunk organizer that **groups semantically related content** from different sources while boosting recent documents
- Engineered a **vector indexing** pipeline using **Qdrant**, with **sparse** and **dense** vectors, leveraging **FastEmbed** for embeddings and **LlamaIndex** for **semantic chunking**
- Designed a **context window management system** that prevents overflow by tracking **model-specific token limits**, and allocating budget between **system prompt**, conversation history, and retrieved chunks
- Added a **distributed task queue** with **Celery**, enabling **parallel processing** of document syncing with rate limiting, **fault tolerance**, and automated retry mechanisms

SocialText (React, Node, GraphQL, Postgres)

- Engineered a full-stack content-sharing application using **Typescript**, **React**, **GraphQL**, **Node**, and **Postgres**
- Improved application performance by implementing **Server Side Rendering (SSR)** using **NextJS** and **URQL**, and utilizing **Redis** to store user sessions
- Built several data models using **SQL** and **TypeORM**, optimizing entity relationships for efficient querying
- Optimized app performance by leveraging **DataLoader** for efficient **batching** of database requests and implementing **GraphQL caching** on the frontend