

Kumar Shivendu

I love Information Retrieval and Observability

✉ mail@kshivendu.dev | 🌐 kshivendu.dev | 📄 KShivendu | 📺 kshivendu | 🐦 KShivendu_

Skillset

Languages Rust · Python · JavaScript · Java · Bash · C++
Frameworks Actix · FastAPI · Express.js · Django · React · Material UI · Bootstrap · PyTest
Tools Docker · PostgreSQL · Redis · Elasticsearch · AWS · Figma · Cypress

Experience

Qdrant: Software Engineer - Core Team

Oct. 2023 - Present

- Qdrant is the **fastest growing vector database with 19k+ stars, 40k+ docker pulls/day, and tens of thousands of deployed instances.**
- **Built the infrastructure for Chaos testing and Continuous benchmarking** which caught many unexpected bugs and perf degradations early
- Built a cluster manager service in Rust to dynamically scale, balance, and migrate Qdrant clusters inside k8s

SuperTokens (YC 20): Software Engineer

Mar. 2022 - Sep. 2023

- SuperTokens is an authentication devtool with 10k+ Github stars, 2.5M docker pulls, and multiple thousand B2B and B2C SaaS users.
- Architected our most requested enterprise features - multi-factor authentication (MFA) and Time-based OTP (TOTP)
- Implemented authorization (RBAC), multitenancy, MFA, and TOTP features in our Python and Node.js SDKs

FamPay (YC 19): Software Engineer Intern

Sep. 2021 - Mar. 2022

- FamPay is India's first numberless card and payments app for teenagers with 10M+ app downloads.
- Worked on multiple features like UPI payments, KYCs, and asynchronous celery batch jobs.

Software Heritage: Google Summer of Code Student

May. 2021 - Aug. 2021

- Software Heritage (SWH) is an organization under Inria (Paris) to collect and preserve all of the open-source software that has ever existed.
- Developed **advanced metadata search features on top of 250M+ public software repositories containing 16 Billion+ source code files**
- Created workers to ingest metadata from 250M+ software repos from Kafka and RPC APIs of multiple services into the Elasticsearch cluster.
- **Designed a custom search query language** and wrote a transpiler that **converts the Abstract Syntax Tree (AST) into Elasticsearch queries.**
- Implemented autocompletion for the custom query language in the web interface using WebAssembly, Javascript, CSS, and Django.

Logy.AI: Software Engineer Intern

Feb. 2020 - Jul. 2020

- Developed the appointment booking portal for Colgate MyToothDoc platform using Django. (100k+ users)
- Revamped the internal image data annotation platform using Django and javascript libraries.
- Doubled the speed of the malaria detection APIs by implementing an OpenCV-based blurry microscopic image detector.

IIT Mandi: Machine Learning Intern

May. 2019 - Jul. 2019

- Trained ML models using Keras and Tensorflow to forecast network usage time-series data.
- Developed the foundation for our **research paper that got accepted by IEEE.**

Side projects

Tech talks

- Improving search relevance using reranking and fusion @ Tensorflow Bangalore Meetup [Link](#)
- Qdrant: Future of search and beyond @ FOSS United Bangalore Meetup [Link](#)

Technical blogs

- Monitoring my life with Grafana, Prometheus, and InfluxDB [Link](#)
- In-depth look at ACID properties of Postgres [Link](#)
- Exploring Data Structures in Redis [Link](#)
- Python Unit testing best practices [Link](#)

Open source contributions @ Software Heritage

- Created crawlers to ingest code from Fedora packages, Gitea, Gogs, and Hex.pm (Erlang package manager).
- **Mentored an intern as a GSoC mentor** during Google Summer Of Code 2022
- Received **Open Source Peer Bonus award from Google for my contributions**

Open Source projects and contributions

- doctree: A parser-based documentation generator for any language with symbol search. Written in Go (850+ stars on Github)
- vscode-advanced-search: VSCode Extension for bulk search/refactor that's more powerful than regex. **Winner in FOSS United Hackathon**
- search-copilot: Chrome extension that scrapes search results on any website for semantic search using GPT embeddings
- ann-benchmarks: **First person to benchmark OpenAI embeddings at 1M scale using Vector databases (Qdrant vs Pgvector).** Creators of Github Copilot, Yahoo Search, Spotify recommendation engine, and Supabase responded to my work on Twitter!

Education

Indian Institute Of Technology (IIT) Bhilai

Bhilai, India

BACHELOR OF TECHNOLOGY IN COMPUTER SCIENCE AND ENGINEERING

Jul. 2018 - May. 2022

CGPA : 8.2/10.0