Shashank Jarmale

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Education

Northeastern University — Boston, MA

Honors B.S. in Computer Science and Finance, 3.9/4.0 — *September 2021 – May 2025*

Relevant Coursework Compilers, Software Development, Networks & Distributed Systems, Artificial Intelligence, NLP, Programming Languages, Object-Oriented Design, Computer Systems, Algorithms & Data, Database Design

Technical Skills & Interests

Programming Languages: Python, Golang, TypeScript/JavaScript, OCaml, Java, C, SQL, Racket

Technologies & Frameworks: AWS, Django, React/React Native, Docker, Kubernetes, PostgreSQL, Terraform, GCP, Next.js, Flask, Firebase, MongoDB, Node.js, Express, GraphQL, Jenkins, PyTorch, LangChain, TensorFlow

Experience

Software Engineering Intern — June 2024 – September 2024

Sentry — *San Francisco, CA*

- Developed a self-service job runner tool enabling product engineers to run production scripts safely, reducing SRE workload by **200+ hours annually** & improving infrastructure maintenance across 600 VMs / 11,000 pods
- Implemented a workflow engine by configuring Argo Workflows in a Kubernetes cluster on GKE, reducing incident occurrences by **up to 10%** and automating infrastructure processes such as Kafka restarts & Clickhouse upgrades
- Designed system for safely running post-deploy Django migrations with dynamic offsets, used by **>50** engineers

Software Engineering Co-op — January 2024 – June 2024

Klaviyo — *Boston, MA*

- Architected a system to validate DNS configurations of **>160k** email sending domains on a daily basis, allowing customers totaling **>$20M** in ARR to correct their SPF, DKIM, and DMARC alignments
- Developed a Django/React flow for creating custom domains, boosting customer brand recognition & deliverability
- Implemented a caching solution on Aurora database reader instances, eliminating CPU utilization spikes, decreasing p99 runtime by **80%**, & reducing costs while hardening the sending pipeline against significant load
- Enabled customers to support one-click unsubscribe & transactional content review, decreasing support tickets by **20%**

Software Engineering Intern — June 2023 – August 2023

Capital One — *Philadelphia, PA*

- Collaborated on an interactive full-stack web application in React & TypeScript, identifying **dozens** of security vulnerabilities in the modern profile banking core and increasing visibility of system integrity to management
- Developed data pipeline to transition banking system data from EC2 instances into a DynamoDB table via an S3 push event Lambda, allowing for valuable insights, graphics, and long-term trends to be displayed to dashboard users
- Increased site reliability and decreased fetching costs by **30%** with a RESTful and serverless Lambda API for queries

Projects

MonkeyLang | *Golang*, github.com/monkey-lang — October 2024 – Present

- Implementing a compiler & virtual machine for the Monkey programming language, with custom lexing, parsing, abstract syntax tree respresentation, compilation, bytecode instructions, execution, and REPL

SandboxNU | *Executive Director, Software Developer* — January 2022 – Present

- Led **70-member** student software consultancy servicing nonprofit, research, and community clients in the Boston area
- Coordinated with members, clients, and advisors with the end goal of making an impact through software project work
- Built a Next.js web app for East Boston Social Centers, increasing accessibility to government resources

Redis Server | *Golang*, github.com/redis-in-go — September 2024 – November 2024

- Built a custom Redis server that supports streams & transactions, enables persistence via RDB files, ensures high availability & failover with replication, and implements the RESP protocol

Music Audio Stem Separation | *Python, PyTorch*, github.com/stem-separator — September 2024 – December 2024

- Trained deep neural networks in stem separation & transcription, automatically generating sheet music from song audio