Suraj Ramchandran

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EDUCATION

Northeastern University **Graduated: May 2025**

Bachelor of Science in Computer Science, GPA: 3.8 / 4.0 – summa cum laude Boston, MA

Relevant Coursework: Distributed Systems, Machine Learning, Object-Oriented Design, Algorithms, Networks, Information Retrieval, Database Design, Linear Algebra, Natural Language Processing, Discrete Mathematics (TA)

TECHNICAL SKILLS

Programming Languages: Python, Golang, JavaScript, TypeScript, Java, Bash, SQL
Frameworks: FastAPI, React, NextJS, Terraform, Bazel, Pantsbuild, Express, PyTorch, LangChain
Tools: Git, Kubernetes, MySQL, AWS, Docker, Linux, Jenkins, Buildkite, Helm

EXPERIENCE

Klaviyo **August 2025 – Present**

Software Engineer – Developer Infrastructure Boston, MA

- Enabled **500+ engineers** to test on fresh, reproducible environments (REs) by building a distributed provisioning system, in Go, that deploys a full Kubernetes namespace with our services and backing datastores
- Implemented a parallelized data seeding pipeline, in Python, to generate realistic and updated SQL fixtures for several user accounts across 85+ tables and 3 databases via parallel Kubernetes Jobs
- Developed a self-service dashboard (FastAPI, HTMX) enabling engineers to provision, monitor, teardown, and stream logs from environments

Klaviyo **July 2024 – December 2024**

Software Engineer Co-op/Intern Boston, MA

- Migrated 8 crucial CI/CD pipelines from Jenkins to Buildkite and **reduced merge-to-deploy times by 45%**
- Developed a plugin ecosystem to abstract and standardize continuous integration functionality in Python, allowing product engineers to **save 200+ hours** spent in developing and debugging CI pipelines
- Built a GitOps-based deployment system using Golang and ArgoCD to **automatically ship 450+ containerized microservices** to multiple Kubernetes clusters on EKS, reducing engineering toil

Instawork **July 2023 – December 2023**

Software Engineer Co-op/Intern Boston, MA

- Automated data gathering for subpoena requests by building a fault-tolerant data pipeline in Python and MySQL to consolidate and export user, shift, and payment data **saving 7+ hours per user export**
- Launched a candidate screening in-app flow to **drive 30% more** sales in the healthcare segment using the Checkr API and Hyperview, an internal server-driven mobile UI framework
- **Improved gig worker performance 25%** by building an LLM-enabled quiz taken before booking a shift using LangChain, Django and Pydantic

PROJECTS

Semantic Video Search **April 2025**

- Developed a neural text-to-video retrieval system that using the CLIP and CLIP4CLIP video embedding model, achieving 90.8% Recall@10 and 68% mAP on Meta AI's FIRE benchmark
- Architected a dual-pipeline system with offline batch indexing to ingest **10,000+ HD videos**, and online query processing using Milvus vector DB for persistent L2-space similarity search with **sub-second retrieval latency**
- Built a Streamlit web app with real-time video search, returning ranked top-15 results with integrated click-stream logging for relevance feedback collection and future model fine-tuning

University Recreation Tracker **December 2022**

- Constructed a NoSQL database containing **250,000+ rows** by web scraping the recreation website using a scheduled Javascript web scraper deployed on GCP Cloud Functions
- Designed and implemented graphs to show daily and weekly usage trends for **5** on-campus gyms using React and ReCharts to determine the optimal times to visit a crowded university gym