Sachin Iyer

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Education

New York University Sep 2020 — May 2023

Bachelors of Science in Computer Science *Brooklyn, NY*

Experience

Amazon Last Mile Software Development Engineering Intern *Seattle, WA 05/2022 — 08/2022*

Data Aggregation Service: Created a full stack service to visualize last mile delivery data. Created a Typescript React frontend with Polaris styling that calls an AWS backend implemented with Java Lambda Functions, API Gateway, S3, and Internal Amazon Services. Used S3 Select and Spark to filter through about 1TB per query.

Hewlett Packard Enterprise (Aruba Networks) Cloud Intern *Santa Clara, CA 06/2019 — 08/2019*

Estimating Bandwidth: Estimated bandwidth using Auto ARIMA/Prophet and other time series algorithms.

NYU High Speed Research Network (HSRN) Academic Researcher *Brooklyn, NY 02/2021 — 05/2023*

Parallel File System: Deployed an NSF funded 6PB storage PFS (SeaweedFS) for usage internally and externally to the HSRN. Automated Deployment with Ansible Playbooks and Rust CLI. Benchmarked with Bonie++ and IOR.

Audio Conferencing: Created an audio service (Portaudio) in C++ that interfaces with internal broker service.

CI/CD: Developed documentation, linting, testing, deployment (DinD with Kaniko) pipelines for the project in Gitlab

Mentorship: Founder of the student research arm. Managed and onboarded over 110 students over 5 semesters

Sparkup Software Development Engineering Intern *Brooklyn, NY 09/2022 — 12/2022*

UX Development: Implemented a new feature in React Native App to link names and phone numbers in transactions

Dark Forest Graphics Intern *San Jose, CA 12/2021 — 02/2022*

Shader Development: Created a typescript plugin that allows for custom WebGL shaders in the Dark Forest game.

Projects

Tweet Toxicity: Used DistilBERT, Pytorch, HuggingFace Transformers, Streamlit and AdamW to classify toxicity type

Wikipedia Editor: Used PySpark, Cohere Embeddings, NYU HPC/ SLURM to analyze 6TB of dumps. Found metrics on the breath of topics wikipedia editors touch with LDA and the variance of topics they edit.

Sembox: A drive with semantic searching over documents with blip, xsum, whisper, bert, mui/nextjs, by taking the cosine similarity of summaries/search terms. Supports images, text, video, audio through intelligent document type recognition

Synesthesia Visualizer: Auditory Visual Synthesis Visualizer with librosa, yin, eks, flask, docker, blender, WebVR

Book Recommendation Engine: Wrote a recommendation engine to group books based on wikipedia page similarity.

Apps Status: Built an API with Rust, Tokio Async, Axum, and Reqwest that proxies status for my self-hosted apps through a Rust Lambda function with a custom Megalodon-rs that pushes outage statuses to Mastodon every 5 min

K3S Cluster: Created a portable resilient fault-tolerant k3s cluster that networks through a wireguard mesh (headscale). Wrote openresty lua to filter by SNI and stream Proxy Passed Requests. Created custom monitoring, uptime, and a wiki

College Rank: Extensible meta-ranking from conference proceedings/best papers, placement rank, paper age, interests

Programming Skills

Langs: Typescript, Javascript, Go, C++, C, Rust, Java, Python, (e)Lisp, Bash/Zsh, Cuda, Kotlin, Perl, Lua, LaTeX

Tech: AWS, Linux, Emacs, QT, Docker, k8s/k3s Rancher, Nginx, Traefik, ReactJS, Tailscale, MongoDB, Postgres, ...

Certifications

AWS Solutions Architect *September 2021*

AWS Cloud Practitioner *August 2021*

Stanford Machine Learning by Andrew Ng *July 2020*

AWS Fundamentals Specialization *June 2020*