Sachin Iyer

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https://github.com/sachiniyer

Education

New York University Sep 2020 — May 2023
Bachelors of Science in Computer Science *Brooklyn, NY*

Experience

Amazon Software Development Engineer *Seattle, WA 12/2023 — Present*

Last Mile Search: Created an Inverted Index over PetaByte-scale Delivery Data with ElasticSearch, Lambda, S3, DynamoDB, React, allowing internal/external teams to audit attributes in real-time and decrease investigation time.

Internal Tools: Increased/Organized internal tooling for entire team, greatly decreasing repetitive operational tasks.

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: Leader of the student research arm. Managed and onboarded over 110 students over 4 semesters

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.

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

mnist-wasm: A custom, resource efficient, rust/wasm nn with jit spawned web-workers, yew, axum, wasm-bindgen

Wikipedia Editor: Used Spark, LDA, Cohere, NYU HPC/ SLURM for variance in editor topics with 6TB of dumps

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

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.

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

Circular Buffer: Wrote a header only circular buffer library in an STL style (e.g. templating, custom iterators).

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

Programming Skills

Langs: Typescript, Javascript, Node, 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*