Sachin Iyer

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https://sachiniyer.com
https://github.com/sachiniyer

Education

New York University   Brooklyn, NY
Bachelors of Science in Computer Science   *Exp. May. 2023*

Experience

Amazon   Seattle, WA
Software Development Engineer   *July 2023*

Amazon   Seattle, WA
Software Development Engineering Intern   *May 2022 – August 2022*

Data Aggregation Service: Created a full stack service to visualize last mile delivery data. Created a Typescript React frontend that calls an AWS API Gateway based backend implemented with Java Lambda Functions, API Gateway, S3, and Internal Amazon Services. Service sifts/caches through up to a TB of data per query with S3 Select.

Deployment/Observability Pipeline: The service is built with the AWS Typescript CDK. It is validated with unit and integration testing before being deployed through CodeDeploy and monitored with CloudWatch alarms and SNS.

NYU High Speed Research Network (HSRN)   Brooklyn, NY
Academic Researcher   *February 2021 – Present*

Mentorship: Leader of the student research arm. Managed and onboarded over 70+ students over 4 semesters.

Parallel File System: Prototyped filesystems for 6TB storage cluster for usage internally and externally to the HSRN

Client Development: Developed a Bash client, and worked on Python, C++, and Javascript clients for Corelink.

Audio Video Conferencing: Created an audio/video service in C++ that interfaces with the Corelink network.

CI/CD: Developed documentation, testing, and linting pipelines for the project in Gitlab.

Sparkup   Brooklyn, NY
Software Development Intern   *September 2022 – December 2022*

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

Dark Forest   San Jose, CA
Graphics Intern   *December 2021 – February 2022*

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

Hewlett Packard Enterprise (Aruba Networks)   Santa Clara, CA
Cloud Intern   *June 2019 – August 2019*

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

Projects

Synesthesia Visualizer: Create a visualizer that mimics the experience of Auditory Visual Synthesis with librosa and yin. Utilizes AWS infrastructure (autoscaling ec2 cluster) for compute and WebGL for VR.

Delivery Service: Created a web crawling service to notify available delivery slots for Whole Foods, Costco, or Safeway. Used AWS SNS, ECS, and Lambda functions. Created headless Chrome docker containers running Selenium.

Git OpenResty: Created a container that utilized Lua JIT with OpenResty to sync git repos as a git-sync alternative

K3S Cluster: Created a portable resilient fault-tolerant k3s cluster that networks through a wireguard mesh

Personal Website: Deployed a website with self-deployed services k3s and full CI/CD using git-sync.

IP Monitor: Used the QT Framework and built a KDE widget to monitor public and private IP Addresses.

Electronic Trombone: Engineer a trombone midi controller using Arduino with capacitive sensing and pid controllers.

Programming Skills

Langs: Typescript, Javascript, Node, C++, C, Rust, Java, Python, (e)Lisp, Bash/Zsh, MDown, JSON, YAML, LaTeX

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

Certifications

AWS Solutions Architect	*September 2021*
AWS Cloud Practitioner	*August 2021*
Stanford Machine Learning by Andrew Ng	*July 2020*
AWS Fundamentals Specialization	*June 2020*