

# Sachin Iyer

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<https://sachiniyer.com>  
<https://github.com/sachiniyer>

## Education

### New York University

*Bachelors of Science in Computer Science*

Brooklyn, NY

*Sep 2020 - May 2023*

## Experience

### Amazon

*Software Development Engineer*

Seattle, WA

*July 2023 - Present*

### Amazon

*Software Development Engineering Intern*

Seattle, WA

*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)

*Academic Researcher*

Brooklyn, NY

*February 2021 - May 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.

**Clients:** Implemented API of internal broker service for Bash, and did core development on Python, C++, and JS

**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 70+ students over 4 semesters.

### Hewlett Packard Enterprise (Aruba Networks)

*Cloud Intern*

Santa Clara, CA

*June 2019 - August 2019*

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

### Sparkup

*Software Development Intern*

Brooklyn, NY

*September 2022 - December 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

*December 2021 - February 2022*

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

## 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 WebVR for visuals.

**Delivery Service:** Created a web crawling service to notify available grocery 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 (headscale)

**Personal Website:** Self-deployed a BabylonJS website with kubernetes k3s and full CI/CD using Git OpenResty.

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

**Electronic Trombone:** Made 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, L<sup>A</sup>T<sub>E</sub>X

**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*