

Sarthak Shrivastava

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WORK EXPERIENCE

Amazon Web Services (AWS)

Software Development Engineer II

Boston, MA

May 2025 – Present

- Designed the replication engine for RDS OnPrem + Oracle to Redshift zETL, using S3 and DMS internal components.
- Managed security reviews for zETL as a Security Guardian, working with SecOps to find and fix vulnerabilities.
- Released S3 enhanced throughput optimizations for DMS serverless, allowing for 2x throughput for full load migrations.
- Added support for CDC in the CockroachDB endpoint to use S3 as a sink to reduce memory load on source DB clusters.
- Designed fault-tolerant metadata and storage layer using DynamoDB and S3 for the DMS rearchitecture project.
- Led knowledge sharing meetings on effectively using internal AI tooling, creating knowledge bases and standardizing agent scripts across the team.

Amazon Web Services (AWS)

Software Development Engineer I

Boston, MA

June 2023 – May 2025

- Redesigned and deployed the Glue Catalog Generation feature, involving C/C++ engine level changes and control plane/API changes.
- Led major engine release for DMS 3.5.x versions; Created engine release guides and implemented pipeline optimizations to transition from quarterly to monthly patch releases.
- Prototyped microservice architecture for DB engine migration endpoints to allow for independent endpoint releases.
- Worked directly with enterprise AWS customers to design an endpoint to support their CockroachDB migrations to Aurora, improving their performance by 75% and reducing operational costs by 28%.
- Resolved several customer issues escalated to C-level stakeholders ensuring minimal customer impact.
- Reduced operational costs by 20% for releases by improving the reliability of integration testing and optimizing DB provisioning workflows for each iterative test run.

Internships

- **Mercari** (Sept–Dec 2022): Developed data pipelines for Facebook and Snapchat ad systems; Built coupon microservice using a reward based system to increase repeated customer interactions with the app.
- **Amazon** (June–Sept 2022): Designed the Glue Catalog Generation feature for the S3 target endpoint on AWS DMS.
- **Johnson & Johnson** (July–Dec 2021): Built Docker-Jenkins CI/CD pipeline and used Selenium to create automation tests for internal inventory systems, reducing manual QA testing and intervention by 70%.
- **L&T Infotech** (July–Sept 2020): Created data pipelines to migrate server statistics to S3 to track peak usage periods during transition to online work during Covid.

PROJECTS

DravaSync: Reverse engineered popular Sportsbook APIs and built an Expo app to track wagers over time; Leveraged Claude Code to design wireframes and implement app screens for the front-end.

Stack: FastAPI, Expo, React-Native, PostgreSQL, SQLite, Redis, Docker

TypeRacer/Covey.town: Added a multiplayer typing game for students waiting for office hours in an online waiting room with a global leaderboard and multiple session support.

Stack: Typescript, MongoDB, deployed using Netlify and Heroku

Budget Statcast: Built a low-cost baseball stat tracking system using iPhone cameras and radar gun; Deployed a companion web app to visualize prior recordings and stats.

Stack: Python, OpenCV, Roboflow, Typescript, Netlify, Heroku, S3, cloudfront

TECHNICAL SKILLS

Languages: Java (advanced), Python (advanced), C/C++ (intermediate), JavaScript/Typescript (intermediate), Go (intermediate), SQL (basic), HTML/CSS (basic)

Cloud/Infra: AWS (DMS, RDS, Lambda, S3, Glue, Athena, IAM), CloudFormation, Docker

Databases: MySQL, Postgres, MongoDB/DocumentDB, CRDB

EDUCATION

Northeastern University, Boston, MA

May 2023

B.S. in Computer Engineering and Computer Science, Minor in Mathematics, GPA: 3.9

Honors: Honors Program Student, Dean's List (all semesters)

Relevant Courses: Algorithms, Computer Systems and Architecture, Databases, Networking, Software Development