

# Aravind Jyothi

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## EXPERIENCE

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### Amazon Web Services (AWS)

Redmond, WA

*Software Development Engineer II (RDS Data API)*

*Aug. 2021 – Present*

- Led control plane redesign and launch for **Amazon Aurora Serverless v2 Data API (reInvent 2023)**, designing public RDS APIs and architecting underlying DynamoDB schemas and orchestration layers.
- Directed end-to-end delivery of **IPv6 support** for Data API, a high-priority mandate for government contracts (White House, IRS), involving complex VPC/NLB migrations and certificate management.
- Modernized service security posture by migrating credential-sharing mechanisms to **short-lived ephemeral credentials (Turtle)**, enhancing system integrity and cross-service authentication.
- Drove a **35% increase in cache hit rate** by implementing a request-coalescing async cache for Secrets Manager, significantly reducing customer costs and improving data plane latency.
- Served as **Primary On-call Leader** for Tier-0 RDS services; resolved a recurring critical latency issue by identifying a metering root cause, eliminating 65 high-severity incidents (Sev2s) over 4 weeks.
- Spearheaded operational excellence by reducing ticket backlog by **70% (650 to 200)** through "Ticket Jail" mechanisms and AI investigation agents; mentored 3+ junior engineers on incident response best practices.

### Amazon Web Services (AWS)

Seattle, WA

*Software Development Engineer (IoT Greengrass)*

*July 2020 – July 2021*

- Contributed to the high-profile launch of **AWS IoT Greengrass V2 (reInvent 2020)**, architecting cloud REST APIs for device fleet management and configuration using Java, Lambda, and DynamoDB.
- Reduced per-stage deployment latency by **87% (from 4 hours to 30 mins)** by resolving critical artifact packaging bottlenecks, accelerating global deployments across multiple production regions.
- Designed and implemented the service's alarming infrastructure from the ground up using CloudWatch and Kinesis, providing automated monitoring and response for high-severity operational issues.

### Schlumberger

Houston, TX

*Software Engineering Intern*

*May 2019 – Aug. 2019*

- Engineered a sensitivity analysis platform for energy forecasting using multidimensional sampling (KD-Trees, Agglomerative Clustering) on GCP, significantly accelerating scenario modeling for large-scale simulations.

### University of Southern California

Los Angeles, CA

*Web Developer (Part-time)*

*Apr. 2019 – May 2020*

- Administered Linux-based web infrastructure for the USC School of Cinematic Arts, optimizing server performance and ensuring high availability for academic platforms.

### CaratLane

Chennai, India

*Software Engineering Intern*

*Apr. 2017 – Jul. 2017*

- Developed asynchronous, responsive webpages using React and Node.js, and implemented a RESTful API in Python to streamline cross-team data access.

## EDUCATION

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### University of Southern California

Los Angeles, CA

*Master of Science in Computer Science*

*Aug. 2018 – May 2020*

### Madras Institute of Technology, Anna University

Chennai, India

*Bachelor of Technology in Information Technology*

*Aug. 2014 – May 2018*

## TECHNICAL SKILLS

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**Languages:** Java, Python, SQL, TypeScript (CDK), Ruby (Infra), Shell Scripting, JavaScript, PHP

**Cloud/Infra:** AWS (RDS, Aurora, Lambda, DynamoDB, S3, IAM, SQS, SNS, EventBridge, Fargate), CDK, Docker

**Reliability/Operations:** Incident Management (On-call Lead), Root Cause Analysis (COE), Canary/Load Testing, JUnit

**Distributed Systems:** Microservices, Multi-tenancy, REST APIs, CI/CD, Connection Pooling (HikariCP), JDBC, sqlx