Sai Duduru

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SUMMARY

Cloud Engineer at AWS with hands-on experience debugging and scaling **serverless, event-driven systems** across Lambda, Connect, AppSync, and SNS/SQS. Delivered **500+ production fixes** with **98% SLA adherence**, including root-cause analyses that led to **service-level improvements adopted by internal AWS teams**. Strong in **distributed systems debugging, automation, and AWS-native architectures**.

EDUCATION

Virginia Polytechnic Institute and State University (VT)   **Blacksburg, VA**
Bachelor of Science in Computer Science: *Graduation May 2024*

RELEVANT SKILLS

Programming Languages/Technical skills: SQL**,** Java, Python, TypeScript
Tools/Libraries: Pandas, Scikit-Learn, Pytorch, GraphQL, Glue, Athena, HTML.
Certification: AWS Data Engineering Associate, AWS Solutions Architect Associate, AWS Certified Cloud Practitioner

WORK EXPERIENCE

Amazon Web Services (AWS)   **Herndon, VA**
Cloud Support Engineer (DMI)   *June 2024 – Present*

- Architected and built scalable solutions using AWS Lambda, API Gateway, DynamoDB, AppSync, Amplify, Cognito, S3, and EventBridge for enterprise and GovCloud workloads addressing security, and fault tolerance requirements.
- Developed automation and cross-team tooling that streamlined workflows which improved vendor collaboration, and reduced resolution time by 15% across Amazon Services specially targeted for AWS Locations Services.
- Conducted root-cause analysis on complex distributed systems issues across Lambda, Appsync, Connect, Device Farm, Lex bots, and SNS/SQS; contributed fixes were adopted by AWS service engineering teams.
- Mentored and onboarded new engineers on AWS service internals, debugging strategies, and architectural design, **cutting ramp-up time and improving case quality metrics**.
- Delivered 510+ technical solutions for production issues with 98% SLA adherence and 95% Customer Satisfaction. Earned **MVP** recognition across North America for technical depth, architectural leadership, and customer impact.

Amazon Web Services (AWS)   Herndon, VA
Cloud Support Associate Intern   *May 2023 – August 2023*

- Deployed and secured EC2-based workloads using ALB, Auto Scaling, and VPC isolation, supporting high-availability architectures.
- Proficiently managed and built secure, highly available database servers such as DynamoDB, Aurora, RDS, and Redshift.
- Provided technical support to customers, proficiently troubleshooting and resolving service-related issues.
- Contributed to the knowledge base by documenting interactions and sharing valuable insights and best practices.

Research Internship at George Mason University   *June 2019 - August 2019*
Research Assistant

- Updated and redacted research information, digitized data, and ensured proper storage management.
- Conducted research and analysis on social patterns and data, contributing to a better understanding of societal dynamics.
- Acquired a foundation in basic ARC-GIS, employing geospatial analysis techniques to enhance data visualization.

PROJECT EXPERIENCE

- ATP Tennis Match Predictor -Python, pandas, scikit-learn, PyTorch, FastAPI, Next.js
  -Built a tennis match outcome predictor using Kaggle ATP data, engineering features from prior matches (Elo, surface performance, head-to-head).
  Trained and evaluated models using scikit-learn and PyTorch with ROC-AUC, LogLoss, and Brier score validation on time-split datasets Deployed predictions via a FastAPI backend with a Next.js frontend, enabling matchup comparisons and player analytics; added CI tests for model and API stability.
- Stock Market Tracker Dashboard: Building an ETL pipeline using Python, Tiingo API, and AWS Athena and AWS Glue to ingest and visualize real-time market data. Pipeline supports stock trend analysis using S3 and serverless compute architecture.
- CS 3214 Personal web and video server Class Project: Developed a **multithreaded HTTP/1.1-compliant file and video server** supporting static file hosting, MP4 streaming, and token-based authentication. Implemented thread pools, request parsing, connection handling, and caching mechanisms; optimized for concurrency, memory safety, and predictable performance under load.
- Personal Website: Designed and built a **responsive, animated personal portfolio** using Gatsby and React, featuring scroll-based animations, typewriter intro, and an interactive vertical work history timeline. Implemented reusable components, custom CSS/PostCSS styling, and performance-optimized builds; deployed as a public-facing developer portfolio.