Abhishek Mathews

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Senior Software Engineer

Senior Software Engineer with 7+ years of experience leading the design and delivery of high-impact systems, including a just-in-time AWS access feature that cut issue resolution time by 50% and reduced user complaints by 20%. Drove cross-functional initiatives to enhance application functionality and owned the modernization of database deployment workflows, eliminating 50% of manual effort. Over two years, spearheaded compliance and cloud cost-optimization efforts by implementing Cloud Custodian policies and architecting an automated off-hours database management solution, generating substantial cost savings for a large financial organization.

WORK EXPERIENCE

Capital One • 03/2019 - 04/2025
Senior Software Engineer

Technologies Used: Python, FastAPI, AWS Lambda, AWS DynamoDB, AWS RDS, Jenkins, Golang, Typescript, Angular, AWS IAM, Boto3, PostgreSQL, Jenkins, YAML, React, Redux, GraphQL

- Streamlined high risk issue resolution by creating just-in-time AWS access feature, resulting in 50% faster issue resolution time.

- Collaborated with team to improve app functionality, leading redesign of Auth and data access and achieving 20% decrease in user complaints.

- Implemented compliant database deployments by integrating with internal CI/CD tooling, reducing manual work by 50% and increasing data security.

- Released controlled deployment acceleration feature which runs on thousands of developer pipelines to save hundreds of hours and decreasing deployment time by 40%

- Overhauled user entitlement access in an internal CLI tooling in order to improve data retrieval/filtering around AWS IAM entitlements, especially for users with thousands of results

- Used application to greatly increase off-hour cost-savings for thousands of AWS resources

- Implemented Cloud Custodian policies and visual emails to drive compliance and cost objectives

- Architected Off-Hours solution for database management in order to gain more cloud cost-savings.

- Designed and implemented a proof of concept solution to assist developers in producing IAM policies that used least-privilege principles based on their applications usage in non-production environments.

Extend • USA • 07/2021 - 07/2022
Senior Software Engineer

Technologies Used: Typescript, NodeJS, AWS Lambda, AWS SQS, AWS DynamoDB/Table Streams, React/Redux, Chakra UI, AWS Cognito, Github Actions

- Designed and Released Customer-Facing Portal For Purchased Warranty Experience

- Helped design and build authentication flow along with the security team

- Built, updated, and maintained key API endpoints used by the application

- Brought new engineers up to speed with technology stack, architecture, and deployment patterns

Cloudreach • **Reston, VA, USA** • **06/2018 - 03/2019**
Cloud Systems Developer

- Executed Cloud Infrastructure standups for a large Financial Organization

- Supported front door tickets and requests to build out one-off resources

- Conducted cloud platform auditing using Cloud Custodian policies

EDUCATION

MS In Computer Science

Georgia Institute Of Technology • Atlanta, GA, USA • GPA: 3.71 • 08/2022

BS in Computer Science

George Mason University • Fairfax, VA, USA • 08/2013 - 05/2017

CERTIFICATIONS

Certified Solutions Architect Associate

AWS

Certified Sys Ops Associate

AWS

SKILLS

Programming Languages: Python, Typescript, Golang, Java
Cloud Platforms: Amazon Web Services
Developer Tools: Github, AI Tooling (Cursor, VSCode+CoPilot, Claude Code, etc.)
DevOps Tools: AWS CDK, Terraform, Jenkins, Docker/Kubernetes
Databases: NoSQL (DynamoDB/MongoDB), MySQL, PostgreSQL
Soft Skills: Problem Solving, Engineering Mentorship, Communication, Teamwork, Leadership, Adaptability/Flexible