

Elizabeth Muthoni

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CAREER SUMMARY

Fullstack Engineer | AWS Solutions Architect | Security Specialist

Results-driven Senior Fullstack Engineer with 4+ years of experience in frontend and backend development. Strong expertise in Java, Typescript, Javascript, Angular, Springboot, API design, database optimization, and scalable cloud solutions. Adept at working with PostgreSQL, Redis, RESTful APIs, CI/CD pipelines, and AWS cloud infrastructure. Passionate about performance and cost optimization, automation, and security best practices. Currently expanding skills in data science, AI/ML, and generative AI through advanced programs from Stanford University.

EXPERIENCE

Back-End Engineer | Freelance

August 2021 – Present

- Developed and maintained scalable, high-performance Ruby on Rails applications for various clients.
- Built and optimized RESTful APIs with a focus on security, caching, and efficiency.
- Designed relational database models (PostgreSQL, Redis) and optimized complex queries for performance.
- Implemented Rails caching mechanisms (fragment caching, low-level caching, Redis integration).
- Integrated WebSockets (Pusher) for real-time features like notifications and chat functionality.
- Worked on background job processing using ActiveJob with Sidekiq alternatives (Delayed Job, Resque).
- Conducted code reviews, performance tuning, and debugging for large-scale applications.
- Ensured API security by implementing authentication (JWT, OAuth), role-based access control, and encryption.
- Deployed applications to cloud platforms (AWS, GCP) and automated CI/CD pipelines.

Cloud Engineer | AWS Solutions Architect | Freelance

August 2024 – Present

- Designed and deployed scalable, highly available, and fault-tolerant AWS cloud architectures using EC2, S3, RDS, Lambda, IAM, and VPC.
- Implemented Infrastructure as Code (IaC) using Terraform and CloudFormation for automated cloud provisioning.
- Developed and maintained CI/CD pipelines using Jenkins, GitLab CI/CD, and AWS CodePipeline, improving deployment efficiency by 40%.
- Optimized cloud costs, reducing AWS billing by 25% through resource right-sizing and automation strategies.

- Implemented monitoring and logging using AWS CloudWatch, Datadog, and ELK Stack to improve system observability and incident response.
- Ensured AWS security best practices by configuring IAM policies, security groups, and intrusion detection systems (IDS/IPS).
- Troubleshooted and resolved cloud infrastructure issues, collaborating with cross-functional teams.

Freelance Python Developer | Backend Engineer

August 2020 –

Present

- Developed and optimized high-performance backend services using Python (Django, Flask, FastAPI) for scalable applications.
- Built and maintained RESTful APIs integrated with AWS services (Lambda, RDS, S3) for seamless cloud-native operations.
- Implemented automated monitoring and security alerts using CloudWatch, Prometheus, and Datadog.

Intern Full Stack Software Engineer

Future Interns

July 2024 – August 2024

- Developed a to-do list web app using Python and JavaScript, improving task completion efficiency by 40%.
- Designed and launched a personal portfolio site, increasing visibility and engagement by 50%.
- Built an eCommerce platform with optimized backend queries, improving response time by 35%.

Freelance Cybersecurity Analyst

March 2020 – December 2024

- Conducted AWS security audits and cloud vulnerability assessments, ensuring compliance with security standards.
- Deployed intrusion detection systems (IDS), VPN solutions, and IAM security policies to enhance cloud security.
- Provided consulting on AWS security best practices for startups and enterprise businesses.

CERTIFICATIONS

- AWS Certified Cloud Practitioner
- AWS Solutions Architect – Associate
- Azure Administrator (In Progress)
- Azure AI Fundamentals
- Kubernetes and Cloud Native Associate(KCNA)
- CompTIA Security+,
- Cybrary Certifications in Security Engineering, Zero Trust Architecture, DevSecOps certifications
- Fundamentals of Data Science in Precision Medicine – Stanford University
- AI/ML Fundamentals – Stanford University
- Introduction to Generative AI with AWS – Udacity

PROJECTS

[Cloud Projects](#)

[Full Stack Projects](#)

[Security Projects](#)

TECHNICAL SKILLS

Back-End Development:

- Ruby on Rails (4+ years), Python (Django, Flask, FastAPI)
- RESTful API Development, GraphQL
- Database Optimization: PostgreSQL, Redis, MySQL, MongoDB
- Caching & Performance Optimization (Rails Fragment Caching, Redis)
- WebSockets & Real-time Applications (Pusher, ActionCable)
- Background Job Processing (ActiveJob, Delayed Job, Resque)
- API Security, JWT, OAuth, Role-Based Access Control

Frontend Development:

- Java,
- Typescript
- Javascript
- Angular
- Springboot
- React

Cloud & DevOps:

- AWS (EC2, S3, RDS, Lambda, VPC, IAM, CloudFormation)
- Infrastructure as Code: Terraform, CloudFormation
- CI/CD Pipelines: Jenkins, GitLab CI/CD, AWS CodePipeline
- Monitoring & Logging: CloudWatch, Datadog, ELK Stack, Prometheus
- Docker, Kubernetes, Linux Server Administration

Version Control & Collaboration:

- Git, GitHub, GitLab, Agile/Scrum
- Remote Work & Distributed Teams