SAHITHI AEKKA
CLOUD SOLUTIONS ARCHITECT

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AWS Certified Cloud Solutions Architect with Master's in Computer Science from the University of Michigan. Hands-on experience in designing, deploying, & optimizing cloud-native solutions. Proficient in AWS, Infrastructure as Code (IaC), serverless architecture & container orchestration. Passionate about building secure, cost-effective, & scalable cloud systems.

Education | **Masters of Science in Computer Science** | University of Michigan | 2023-24 | 3.67 /4.00

Skills | **Cloud Platforms:** AWS (EC2, S3, Lambda, ECS, Fargate, IAM, VPC, ELB, CloudFormation, CloudWatch, Aurora, DynamoDB) | **IaC & DevOps**: CloudFormation, Git, GitHub Actions, CI/CD, AWS CodePipeline | **Programming**: Python, Bash, Linux, SQL | **Containerization**: Docker, Amazon ECR, Kubernetes | **Database:** MySQL, PostgreSQL, Amazon Aurora, DynamoDB.

Certifications

AWS Certified Solutions Architect – Associate | Amazon Web Services | Mar 2025
AWS Cloud Support Associate Specialization | Amazon Web Services (Coursera) Jan 2025
AWS AI Practitioner – Foundations of Responsible AI | Amazon Web Services | Apr 2025

Project Experience

Cloud Solutions Architect | Containerized Library Management System| Microservices Architecture Project | Aug 24 – Mar 25
- Designed cloud-native Library Management System using a microservices architecture deployed on **Amazon ECS Fargate**
- Developed modular services for Books, Users, & Borrowing, each containerized with Docker & deployed independently for scalability
- Built **RESTful APIs** for CRUD operations & **JWT authentication**, routing requests through **Application Load Balancer(ALB)**
- Provisioned infrastructure using **CloudFormation IaC**, with **IAM roles**, **AWS Secrets Manager**, & **Security Groups** for compliance
- Used **Amazon Aurora PostgreSQL** for application data storage with **automatic scaling** & **99.9% uptime** across multiple AZs
- Implemented **CI/CD pipeline** with **AWS CodePipeline**, reduced deployment time by **60%** with automated testing & container image builds
- Deployed **Amazon ECR** for container registry with **vulnerability scanning** & **lifecycle policies** for image management

DevOps Engineer | Cloud Native Web Application CI/CD Pipeline | AWS Developer Tools Suite Project | Jul 25 – Aug 25
- Deployed cloud-native web application with complete **CI/CD automation** using **AWS Developer Tools** ecosystem
- Integrated **GitHub repository** with **AWS CodeStar** connections for secure source code management & **webhook-triggered deployments**
- Automated application packaging using **AWS CodeBuild** with **multi-stage Docker builds**, achieving 40% faster build times
- Implemented zero-downtime deployments using **AWS CodeDeploy** with a blue-green deployment strategy & automated rollback
- Provisioned infrastructure using **AWS CloudFormation IaC** for **EC2**, **Auto Scaling Groups**, **ALB**, & **Security Groups**
- Built end-to-end **CI/CD pipeline** with **AWS CodePipeline**, integrating build, test, & deployment stages with automated approval gates
- Configured **CloudWatch monitoring** & **IAM least-privilege access**, reducing deployment failure detection time by 70%
- Achieved 95% deployment success rate & reduced manual deployment effort by 80% through complete automation

AWS Cloud Solutions Architect | AWS Topic Hub | Cloud Architecture Portfolio Project | University of Michigan | Jan 25 – Mar 25
- Architected multi-page website hosted on **Amazon S3**, with **CloudFront CDN** for low-latency global access & SSL-secured delivery
- Built **serverless REST API** with **API Gateway**, **Lambda**, & **DynamoDB** for real-time data capture from user interactions
- Monitored application health with **CloudWatch dashboards**, **logs**, & **alarms**, integrating alerting & auto-remediation
- Implemented a **multi-region deployment strategy** with **disaster recovery failover**, achieving a target of **99.99% availability**

Work Experience

Assistant Systems Engineer| Tata Consultancy Services (TCS) | Chennai, India | Jul 21 – Dec 22
- Supported critical banking systems for Citibank, focusing on system availability, log analysis, & production stability in large-scale enterprise environment
- Executed production deployments & troubleshoot live systems, ensuring minimal downtime & fast issue resolution
- Deployed & monitored distributed data streaming solutions using Apache Kafka, enhancing real-time processing & system resilience