Abu Kalam Babuji Sadiq Basha

Software Engineer

+1 902-817-1280 | abukalam2909@gmail.com | linkedin.com - abukalambabuji | github.com - abukalam2909

Summary

Software Engineer with 2+ years of experience in backend development, cloud infrastructure, and DevOps automation. Proficient in automation using python and building scalable microservices and serverless applications using Spring Boot, Docker, and Kubernetes. Skilled in Infrastructure as Code (Terraform), CI/CD pipelines, and test automation across agile environments. AWS Certified Solutions Architect with hands-on experience in GenAI/ML workflows and full-stack development.

Education

Dalhousie University — Halifax, Canada   *Sept 2024 – Dec 2025*
Master of Applied Computer Science [CGPA: 4.05/4.3]

Vellore Institute of Technology — TamilNadu, India   *Jul 2019 – Aug 2023*
Bachelor of Computer Science and Engineering [CGPA: 8.3/10]

Technical Skills

Languages	: Java, Python, C++, SQL, Bash
Frameworks	: Spring Boot, Maven, Robot Framework, Flask, React.js (basic)
DevOps	: Docker, Kubernetes, Helm, Terraform, Jenkins, Git, JIRA, AWS, Azure, GCP, Postman
DBMS	: MySQL, MongoDB, DynamoDB
Other	: Cybersecurity, AI/ML, GenAI, 5G NR, OOP, DSA, REST APIs, Agile, Scrum

Work Experience

Machine Learning Intern, Deepsense — Halifax, Canada   *Sept 2025 – Dec 2025*

- Developed an Autoencoder-based anomaly detection pipeline for **marine engine telemetry** using unsupervised learning.
- Preprocessed **multi-sensor time-series** data with signal alignment, resampling, and schema normalization.
- Containerized the model with **Docker** and preparing for **edge deployment** using **Kubernetes**-based **MLOps** workflows.
- Built an analysis dashboard with **streamlit** framework to visualize and generate the inference reports for anomaly analysis.

Software Engineer, Ericsson R&D — Chennai, India   *Jan 2023 – Jul 2024*

- Developed and maintained RESTful **cloud-native microservices**, enabling core functionalities for internal **monitoring and logging** tools for **telecom software** used by 3+ global teams.
- Developed a **Python-based CLI tool** to compare **Helmfile versions** and deployment statuses of microservices across releases, streamlining **release verification**.
- Optimized deployment pipelines using **Helm charts** with **Docker** and **Kubernetes**, reducing production downtime by 30%.
- Created and automated over **150 test cases** and **builds** in **CI/CD pipelines**, reducing the QA effort by 15+ hours/week.
- Migrated **80+ integration test suites** from **JUnit** and **50+ UI test cases** from **Protractor** to **Robot Framework**, improving coverage and reliability by 40%. This approach was **appreciated and shared** across teams.

Academic Experience

Team Lead, Dalhousie University   *Sept 2024 – Dec 2024*

- **Led a team** of 5 developers to build a **command-line tool in Spring Boot** using **Tree-sitter** to detect code refactorings across **Python**, **JavaScript**, and **C++** codebases in a git repository.
- Received the **highest grade** for a good **Agile process** and **Test Driven Development**.
- Parsed Git commit histories and generated AST comparisons with **90%+ accuracy**, applying **SOLID** principles.

Teaching Assistant, VIT University   *Jan 2022 – May 2022*

- Teaching Assistant for core programming courses (**Problem Solving, OOP**) in **java** at VIT Chennai, supporting **100+ students** through hands-on coding labs, debugging guidance, and assignment evaluation.
- Designed and graded algorithmic problem sets focused on space/time **complexity optimization**.
- Collaborated with professors to develop **automated grading scripts (Python)**, reducing evaluation time by 30%.

Academic Projects

NutriLens **(GitHub Link)**
React.js, Spring Boot, Amazon EKS, NGINX, DynamoDB, Amazon S3, CI/CD, IaC

- Developed a **cloud-native full-stack microservice architecture** integrated with **REST APIs** that supports **nutritional analysis** and comparison of 3.8M+ products and provide dietary recommendations with less than 1 second latency.
- Automated deployment of **containerized** services to **Amazon Elastic Kubernetes Service (EKS)** using **Infrastructure as Code (Terraform)** and CI/CD pipeline via **GitHub Actions**.

YouTube Analytics Studio **(GitHub Link)**
React.js, AWS Lambda, Amazon Bedrock, Amazon Comprehend, DynamoDB, S3

- Built a serverless **GenAI** platform using **RAG** architecture to analyze YouTube videos and comments with **LLMs, prompt engineering,** and **Amazon Comprehend**; Orchestrated multi-**Lambda** pipeline for this **sentiment-driven** viewer insights.
- Engineered a hybrid analysis pipeline combining **Amazon Comprehend** for statistical sentiment scoring with a **Claude 3**-powered LLM for contextual insights, using **dynamic prompt engineering** and sentiment-aware comment retrieval.

E-commerce Inventory App **(GitHub Link)**
Kubernetes, Spring Boot, GKE, Docker, Terraform, Cloud Build

- Designed scalable **Spring Boot microservices** for adding products to inventory and deployed on Google Kubernetes Engine.
- **Optimized Docker images** with multistage builds and lean base layers, leading to 80% reduction, improving cold start time.
- Provisioned scalable infrastructure using **modular Terraform**, enabling multi-environment deployments via Cloud Build.

TaskTap **(GitHub Link)**
React.js, Tailwind CSS, AWS Lambda, API Gateway, DynamoDB, Cognito, Terraform, CloudWatch, GuardDuty

- Architected a serverless household task management platform with **JWT-based RBAC** using AWS Cognito, enabling admins to create homes, assign members, and automate fair task distribution across 30-day periods.
- Implemented intelligent task assignment engine with round-robin rotation logic supporting weekly, bi-weekly, and custom recurrence patterns; built **RESTful APIs** with Lambda functions secured via API Gateway authorizers.
- Deployed fully serverless infrastructure using Terraform IaC with **integrated security monitoring** through GuardDuty and CloudWatch for threat detection and anomaly tracking across the stack.

Certifications

Certified Kubernetes Application Developer (CKAD) – CNCF **Credential Link**

- Validated hands-on ability to design, build, and troubleshoot cloud-native applications on Kubernetes.
- Worked extensively with Pods, Deployments, Services, ConfigMaps/Secrets, Ingress, RBAC, and multi-container patterns.

AWS Certified Solutions Architect – Associate (SAA-C03) **Credential Link**

- Designed fault-tolerant, cost-optimized workloads on AWS (VPC, ALB/ASG, RDS/DynamoDB, S3, CloudFront, IAM).
- Hands-on labs implementing multi-AZ patterns and IaC; applied the AWS Well-Architected Framework.

AWS Certified Cloud Practitioner **Credential Link**

- Validated core AWS services, global infrastructure, shared responsibility model, and pricing/billing concepts.
- Completed foundations labs covering identity, security, compute, storage, networking, and basic cost controls.

Microsoft Azure Fundamentals (AZ-900) **Credential Link**

- Covered Azure core services (compute, storage, networking, databases) and governance/identity (RBAC, ARM).
- Practiced pricing/SLAs/TCO with the Azure pricing calculator and cost management basics.

AWS Certified AI Practitioner **Credential Link**

- Demonstrated foundation in generative AI and ML use cases on AWS; model selection and prompt-engineering basics.
- Built small prototypes with Bedrock-hosted models and Amazon Comprehend; evaluated safety, latency, and cost.

Verzeo ML Internship **Credential Link**

- Built an end-to-end **NLP pipeline** for **sentiment analysis** of customer reviews, achieving **96% accuracy** on live data.
- Automated data preprocessing for 5,000+ reviews using **Pandas**, reducing manual effort by 15 hours/week.

Volunteer Experience

Educator, Chennai Volunteers — Chennai, India *Mar 2022 – Jun 2024*

- Taught underprivileged school students the fundamentals of technology from their perspective: smartphone literacy, internet basics, file management, and an introduction to coding logic.