

MADHAV KUMAR

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TECHNICAL SKILLS

Core Skills:

Python, Java, AWS (Lambda, S3, EC2, RDS, DynamoDB, SQS, SNS, CloudWatch, IAM), Docker, Kubernetes, PostgreSQL, ClickHouse, GitLab CI/CD, Git

Additional Experience:

Spring Boot, MySQL, MongoDB, REST APIs, Microservices, Linux, Jira, Confluence

EXPERIENCE

Nielsen – Software Development Engineer Intern

Mar 2025 - Present

- Engineered an automation framework for AWS Lambda validation using Python + CloudWatch, eliminating repetitive log checks and cutting manual testing time by ~60%.
- Integrated automated validation into CI/CD pipelines enabling both environment-based manual runs and default UAT auto-runs on every Lambda update.
- Implemented Lambda + Docker media workflow to compress WAV to FLAC (~70% smaller), reducing S3 storage footprint across regions.
- Implemented PostgreSQL-driven asset evaluation logic and published structured events across SNS → SQS pipelines.
- Enhanced asset-tracking Lambdas to generate real-time SQS events and validated 1000s of ClickHouse ingested records for accuracy.
- Designed an automated web-scraping framework for Amazon Prime Video metadata, running twice daily and collecting 1000–1500 episodes record per cycle to support internal data workflows.
- Analyzed large-scale S3 digital footprints through Python scripts to detect asset metadata gaps.
- Self-trained across AWS (EC2, DynamoDB), Docker, GitLab CI/CD, and Kubernetes (deployments, services, configmaps, secrets, sidecars).

PROJECTS

Kubernetes Logging System (Personal Project)

- Built a Kubernetes-based sidecar system using ClickHouse and Fluentd for log collection and analysis.
- Deployed locally on Minikube to simulate real-world logging and observability workflows.

Sentiment Analysis API (Spring Boot + Java NLP)

- Developed a Spring Boot application that analyzes user input text using Stanford CoreNLP to detect sentiment.
- Designed a simple REST API for real-time sentiment classification and response delivery.

Task Scheduler App (Android – Kotlin + SQLite)

- Built an efficient task management system using SQLite for data storage. Implemented CRUD operations (Create, Read, Update, Delete) with search functionality. Ensured smooth and optimized user interaction with a clean and intuitive UI

CERTIFICATES

Application Development in Java

- Gained practical knowledge in Java GUI development, JDBC for database management, and Java networking. Applied these skills in projects to improve application design and functionality.

EDUCATION

Lovely Professional University
Bachelor of Technology-Computer Science & Engineering
CGPA: 8.76

Jalandhar, Punjab, India
August 2022–Present

Litera Valley School
Senior secondary education (PCM)
Percentage: 81.00

Patna, Bihar, India
2019 - 2021

PTJM Saraswati Vidya Mandir
Secondary education (10th)
Percentage: 92.00

Rajgir, Bihar, India
2018 - 2019

EXTRA-CURRICULAR ACTIVITIES

Inter school sports participation in volleyball