

Laxman M

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SUMMARY

Software Engineer with 4+ years of experience in backend development, specializing in real-time data processing, API development, and database optimization. Skilled in Java, Spring Boot, Kafka, MQTT, and MongoDB. Experienced in building scalable solutions and delivering features from design to deployment. Passionate about contributing to impactful projects and solving complex technical challenges.

EDUCATION

University of Amsterdam (UvA) & Vrije Universiteit Amsterdam (VU)

MSc in Computer Science (Big Data Engineering – Joint Degree)

Amsterdam, Netherlands

Sep 2025 – Expected Jul 2027

PES University

Bachelor of Technology in Computer Science 7.78 CGPA

Bangalore, India

Aug 2017– Jun 2021

EXPERIENCE

KLOUDSPOT | Senior Software Engineer

Bangalore, India | Jul 2023 – Jul 2025

- Led the implementation of airside flight detection at airports by integrating camera feeds and flight radar data, enabling real-time vehicle signalling on the airside through a custom rule engine. Enhanced **Apache Flink processing** for accurate flight event detection and signal dispatching, successfully delivering the solution to the client in production.
- Implemented end-to-end **automated report generation** and delivery, replacing a fully manual process. This significantly reduced operational overhead and eliminated 100% of manual tracking and distribution efforts, improving team efficiency and customer responsiveness.
- Built a scalable **MQTT**-based ingestion pipeline to capture real-time sensor and third-party IoT telemetry—streamlining cross-industry data integration and simplifying partner onboarding.
- Successfully upgraded **MongoDB from version 6.0 to 8.0** in a production environment with zero downtime—ensuring platform stability, improved performance, and future compatibility.

KLOUDSPOT | Software Engineer

Bangalore, India | Jul 2021– Jul 2023

- Designed and deployed secure, high-performance **RESTful APIs** to serve analytical data from MongoDB, enabling real-time dashboards and showcasing advanced analytics capabilities.
- Implemented a **WebSocket**-based streaming layer that consumes *real-time Kafka data* and delivers live analytics to dashboards—ensuring instant data visibility and a seamless user experience.
- Reduced MongoDB query latency by over 70%** by refactoring aggregation pipelines, introducing targeted indexes, and optimizing query structures—resulting in significantly faster API responses and improved system throughput.
- Integrated real-time communication channels using **WhatsApp** (Meta API) and **SMS** (Twilio/Sparrow) to deliver instant alerts and reports—enhancing user engagement and platform adoption across key clients.
- Established a robust foundation in event-driven architecture and stream processing, with hands-on experience in Kafka, MQTT, WebSocket, and MongoDB—enabling scalable, low-latency backend systems.

KLOUDSPOT | Intern

Bangalore, India | Feb 2021 – Jul 2021

- Independently conceived and built a unique application concept ("**TransNithya**") for mitigating **Bangalore's traffic issues**.
- Engineered its backend using Java/Spring Boot, developing core APIs and services.
- Created the frontend interface (HTML/CSS) with Angular/JavaScript, implementing user interactions to connect individuals with public transport options.
- Containerized the application components for cloud deployment onto AWS EC2 (private account).

TECH STACK: JAVA, Spring Boot, MongoDB, MQTT, Apache Kafka, Apache Flink, Angular, Web Socket, AVRO, Apache Camel, Elasticsearch.

PROJECTS

DIGITAL TWIN FOR WILDFIRE

Sept - Oct 2025

Developed a Digital Twin(DT) system to simulate and analyse wildfire patterns across Portugal by cleaning, structuring, and visualizing large-scale wildfire datasets. The project involved creating interactive maps and real-time dashboards to identify spatial and temporal trends, supporting civil protection and policy decision-making. Also designed a framework that enables researchers, policymakers, and firefighters to explore and analyse data effectively, while laying the groundwork for predictive analytics and AI-driven wildfire forecasting.

SMART WASTE SEGREGATION

Jan – May 2021

Developed an automated waste segregation system using sensor technology and Convolutional Neural Networks (CNN) to classify solid waste. Wet and metal detection was handled via sensors, while image-based classification distinguished between glass and plastic using a CNN. The system reduced manual labour, improved safety, and ensured accurate segregation for efficient recycling.

SKILLS

Java, Python, C | Spring Boot, Angular, Flask, JavaScript | MongoDB, PostgreSQL | Apache Flink, Kafka, MQTT, AVRO | Git, Kubernetes, Docker & AWS EC2