

Kamal A Sharma

Software Engineer | DevOps & AI Engineer
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Profile

Software Engineer with 2+ years shipping production software across data science, backend engineering, DevOps, and embedded systems. I learn new stacks by building with them, not by reading about them first: LLM-powered pipelines with the OpenAI API and LangChain, PyTorch models deployed via Helm on Kubernetes, and an embedded RTOS learned from scratch for a hands-on project. I write documentation precise enough that someone who wasn't in the room can act on it without asking a follow-up question. Looking for a role that uses this range — not one that filters for a single checklist skill.

Skills

- Programming:** Python, TypeScript/JavaScript, Java, C, SQL, Bash, R
- AI, ML & LLM:** PyTorch, scikit-learn, pandas, OpenAI API, LangChain, prompt engineering, LLM integration (DataCamp certified)
- Backend & Data:** Node.js/Express, REST API design, PostgreSQL, ETL/data pipelines
- Frontend:** React, Next.js, HTML, CSS
- Cloud & DevOps:** AWS (EC2), Docker, Kubernetes (k3s), Helm, Terraform, CI/CD (Jenkins, GitHub Actions), Prometheus, Grafana, Nginx
- Embedded & Systems:** C, NuttX RTOS, finite-state machine design, MQTT (libmosquitto)
- Practices:** Git, technical documentation, cross-functional stakeholder communication
- Languages:** English (C1, IELTS) | German (B1, Goethe-Institut certified; progressing to B2) | Hindi (native)

Professional Experience

Software Engineer Associate (Full Stack & DevOps) 05.2022 – 03.2024
Blackcoffer OPC Pvt. Ltd., New Delhi, India

- Developed and deployed 5+ production-grade SaaS applications for global clients, improving client operational efficiency by up to 40%.
- Designed and implemented end-to-end CI/CD pipelines that reduced deployment time from days to under 2 hours, enabling faster feature releases.
- Containerized 10+ microservices using Docker, resulting in 60% improvement in application scalability and deployment consistency.
- Provisioned and managed cloud infrastructure on AWS using Terraform, reducing infrastructure provisioning time by 70%.
- Automated monitoring and logging systems, decreasing average incident resolution time by 50%.
- Delivered 12+ major features on time across cross-functional teams, contributing directly to business growth and client retention.

Skills: Node.js, Express, REST API design, PostgreSQL, Python, Git, AWS, Terraform, Docker, Kubernetes, CI/CD

Data Scientist Intern 12.2021 – 03.2022
DevTown, Bangalore, India

- Built classification and regression models in Python (scikit-learn, pandas) end to end, from raw data to evaluated output.
- Designed reusable, reproducible preprocessing pipelines — feature engineering, normalisation, train/test splitting.
- Ranked top 20 of a 250-student cohort for consistent technical performance (per official letter of recommendation).

Skills: Python, scikit-learn, pandas, machine learning, feature engineering

Projects

Qualimind — Intelligent Preprocessing Platform for Qualitative Data 2025
github.com/kamalbhایی/HIS-Project-Qualimind

- Designed and shipped a full-stack platform end to end — concept to live deployment — converting qualitative and mixed-type datasets into structured, ML-ready formats via a configurable R-Plumber pipeline with an LLM-powered step (OpenAI API, LangChain) and per-job metadata tracking.
- Built the React/TypeScript frontend and Express API with real-time job-status updates (Socket.IO); deployed a multi-environment stack on AWS EC2 (Terraform, Docker Compose, Nginx/TLS). Live at qualimind.kamalbhایی.de.

Skills: React, TypeScript, Express, OpenAI API, LangChain, Socket.IO, R Plumber, PostgreSQL, Docker, Terraform, AWS EC2, Nginx

Edge-Based Wildlife Detection System		2024
<i>github.com/kamalbhایی/cloud-computing</i>		
- Built a distributed edge-to-cloud image classification pipeline (PyTorch) on a self-managed k3s cluster, persisting results to PostgreSQL and MinIO. - Deployed via Helm on Kubernetes with Jenkins/GitHub Actions CI/CD and full Prometheus/Grafana observability across nodes.		
Skills: Python, PyTorch, Kubernetes (k3s), Helm, Docker, PostgreSQL, MinIO, Jenkins, GitHub Actions, Prometheus, Grafana		
aRTS-RTOS-WMCTRL — Real-Time OS Washing Machine Controller		2026
<i>Team Project (3 members) github.com/kamalbhایی/aRTS-RTOS-WMCTRL</i>		
- Learned NuttX RTOS from scratch to build a real-time, time-triggered controller on an STM32 NUCLEO-G431RB, implementing a safety-focused finite-state machine (door/vibration/sensor fault latches). - Built a diagnostics dump reporting task-lateness and timing metrics to evaluate scheduling determinism under tight resource constraints.		
Skills: C, NuttX RTOS, embedded systems, real-time scheduling, finite-state machine design, STM32		
mqtt-server-sim — MQTT Reliability Patterns for Distributed Sensor Systems		2026
<i>Personal Project github.com/kamalbhایی/mqtt-server-sim</i>		
- Built an MQTT pub/sub simulation in C (libmosquitto) with QoS 1 delivery, Last-Will-and-Testament failure detection, and retained-message recovery for a simulated sensor network. - Containerised the Mosquitto broker with Docker Compose to demonstrate reliability patterns for availability-critical distributed systems.		
Skills: C, libmosquitto, MQTT, Docker, distributed systems reliability patterns		
Education		
B.E. Computer Engineering		07.2019 – 05.2023
<i>Gujarat Technological University, Surat, India</i>		
Relevant coursework: Database Management Systems, Software Engineering, Business Information Systems.		
Additional Experience (Germany)		
Store Staff		02.2026 – Present
<i>Uniqlo Europe Ltd. — German Branch, Frankfurt am Main</i>		
Support German- and English-speaking customers in a high-footfall retail environment, 20 hrs/week.		
Sales Associate (Verkäufer)		06.2024 – 12.2025
<i>ZARA Deutschland B.V. & Co. KG, Frankfurt am Main</i>		
Delivered customer advisory and sales service in a high-footfall retail environment.		
Certifications		
DataCamp AI Engineer for Developers — Associate		AIEDA0017792606213
Prompt engineering and LLM API integration for building AI-assisted application features and simple chatbots.		
DataCamp Data Engineer — Associate		DE0016442570088
Database design and schema interpretation, SQL data management, cloud data storage/pipeline tools, data extraction, cleaning, and quality validation.		
Docker Foundations Professional Certificate		Credentials
Containerization fundamentals: images, containers, Dockerfiles, volumes, and networking.		