

VAYSAGE KV

Backend / Java, Python Engineer

Thrissur, Kerala, India · Open to remote (overlaps US time zones)

+91 73539 77190 · kvvaysage@gmail.com

[linkedin.com/in/vaysage-kv-44b84a18](https://www.linkedin.com/in/vaysage-kv-44b84a18) · github.com/vaysagekv

SUMMARY

Backend engineer with 15+ years building production services across Python and Java, currently leading backend development of an in-house computer-vision platform. Strong with FastAPI, asynchronous service design, microservices, REST APIs, and OAuth2/OIDC authentication (Microsoft Entra ID, Backend-for-Frontend pattern). Owns systems end to end — from real-time data pipelines and streaming to SQL data modeling and security hardening — and works effectively across distributed, fully remote teams.

SKILLS

Languages: Python, Java, SQL, JavaScript, C#, C/C++, Bash

Backend & APIs: FastAPI, Spring Boot, Spring, JPA, REST, Microservices, async/await, WebSockets

Auth & Security: OAuth2, OIDC, Microsoft Entra ID, Backend-for-Frontend (BFF), HttpOnly session cookies

Real-time & Streaming: WebSocket, gRPC, WebRTC, LiveKit

Databases: PostgreSQL, MySQL, Oracle, SQLite, Supabase; complex SQL & CTEs

ML / CV integration: YOLOv8 (Ultralytics), ByteTrack, ArcFace, InsightFace, MediaPipe, OSNet/torchreid, ONNX

Tooling & DevOps: Git, Docker, dev containers, uv/pip, Linux, structured logging, pdb/ipdb

Frontend (working): React, Vite

EXPERIENCE

Citrus Informatics, Kochi, India — Project Lead Engineer Jan 2019 – Present

- Lead a two-engineer team building the backend of VisionLog AI, an internal computer-vision platform that demonstrates the company's AI capabilities for attendance tracking and personnel detection, built on a FastAPI service layer that coordinates multiple concurrent camera streams in real time.
- Designed OAuth2/OIDC authentication with Microsoft Entra ID using a Backend-for-Frontend (BFF) pattern and HttpOnly session cookies, keeping access tokens out of the browser and closing a common token-theft vector.
- Architected asynchronous Python services that orchestrate a multi-stage ML inference pipeline — YOLOv8 detection, ByteTrack tracking, ArcFace/SCRFD face recognition, and gait recognition — into a single real-time personnel-identification flow.
- Built a gait-recognition subsystem that fuses pose-based joint-angle features (MediaPipe) with OSNet re-identification embeddings via weighted score fusion, enabling identification when faces are occluded or out of frame.
- Led remediation of a security incident (CVE-2026-39363) caused by an exposed Vite development server, upgrading the toolchain and hardening deployment configuration.
- Designed a tool-agnostic AI context-sharing system (a shared .ai/ folder of skills and agents) adopted across the team's coding tools, standardizing engineering workflows.
- Prototyped real-time voice/video features, evaluating WebSocket, gRPC, WebRTC, and LiveKit, and designed a Malayalam text-to-speech voice-agent architecture.
- Delivered additional backend systems including Neorevv, a Spring Boot application handling authentication and commission/payment calculation for a Middle East real-estate client, and an internal Learning Management System on Supabase with complex CTE-driven reporting and ranking logic.

- Built backend microservices for CitusHealth (ResMed) handling reliable email/SMS patient notifications, and ported the Nettracer lost-luggage tracking application from legacy JSP to Spring Boot.

Mindcurv TSPL, Kochi, India — Software Engineer Oct 2015 – Feb 2018

- Built and maintained B2B e-commerce features for the Delixl/Bidfood platform on the ATG stack (Java, Oracle), implementing new features and resolving production defects.
- Developed a web application for collecting and managing customer quotations.

Earlier Experience

Ridgecone Technologies, Alappuzha, India — Team Lead May 2018 – Nov 2018

- Led the development team and built a SaaS web application from scratch for Halo using Java 8, Spring Boot, Spring, and JPA.

LXI Technologies, Palakkad, India — Software Engineer Oct 2012 – Oct 2015

- Built SERVEASE, a point-of-sale system for hotels and supermarkets (Java, MySQL), and SWADISHTA, its companion mobile ordering app (J2EE, Struts 2, jQuery Mobile).

Robosoft Technologies, Udupi, India — Software Engineer Jul 2010 – Jul 2012

- Developed the NDTV News Reader Windows Phone app (C#, Silverlight, XAML, MVVM) and contributed to other mobile apps and startup-time optimization.
- Diagnosed and fixed a long-standing bug in the AES encryption implementation of an existing application; built a paint application and a Snake game during initial training.

OnMobile Global, Bangalore, India — Associate QA Engineer Aug 2009 – Feb 2010

- Performed functional and user-acceptance testing of value-added telecom services; automated backups with shell scripts.

EDUCATION

Reva Institute of Technology & Management, Bangalore 2005 – 2009

B.E., Electronics & Communication Engineering

CERTIFICATIONS

Oracle Certified Java Professional (OCJP)