

LAKSHIT WASAN

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PROFILE

Software Engineer specializing in backend systems, distributed APIs, and cloud-native applications. Experienced in building and owning production services end-to-end—from system design and API contracts to deployment, monitoring, and performance optimization. Strong foundation in microservices architecture, async processing, and scalable database design.

EDUCATION

Bachelor of Technology in Computer Science and Engineering

Sept 2021 – May 2025

BML Munjal University, Haryana

Cumulative GPA: 8.4 / 10.0

SKILLS

Core Backend Skills

Languages: Python, JavaScript, C++

Backend: FastAPI, Node.js, Express.js

Databases: MSSQL, PostgreSQL, MongoDB

Systems: REST APIs, Microservices, Caching, Async Processing, Containerization

Cloud & DevOps: Docker, AWS, GCP, CI/CD, GitHub Actions

Frontend (Supporting): React.js (for dashboards & internal tools)

EXPERIENCE

Software Engineer (Backend)

Aug 2025 – Present

Nebula9.ai, Gurgaon, India

- Designed and deployed production-grade backend services powering AI-driven enterprise workflows, reducing manual operations time by **30–40%** across 3+ client platforms.
- Owned end-to-end delivery for multi-tenant systems—writing HLD/LLD docs, creating API contracts, and ensuring **99.9% uptime** through staged rollouts and observability tooling.
- Improved API response times by **20%** via optimized query patterns, connection pooling, and caching strategies in FastAPI and PostgreSQL.

Technologies Used: FastAPI, PostgreSQL, Docker, AWS, Google ADK, React (supporting)

Software Engineer Intern (Backend & Systems)

Oct 2024 – July 2025

Nebula9.ai, Gurgaon, India

- Engineered a scalable data analytics platform by migrating legacy MERN architecture to **FastAPI + PostgreSQL**, improving system performance and maintainability by **~35%**.
- Built modular microservices with clear service boundaries, contributing to architecture discussions and writing design artifacts adopted by the engineering team.
- Developed secure REST API layers abstracting AI model calls, enabling real-time insights for **financial & operational dashboards**.
- Containerized services with Docker and deployed to AWS via CI/CD pipelines in collaboration with the DevOps team.

Technologies Used: FastAPI, PostgreSQL, LangChain, LangGraph, Docker, AWS, MERN Stack

Web Developer Intern

June 2022 – Aug 2022

Coding Blocks, Delhi, India

- Delivered **6+ production-ready** web applications implementing secure authentication, input validation, and optimized MongoDB schemas that improved data-access efficiency by **up to 25%**.

PROJECTS

AgentZero — Autonomous AI Coding Agent *Docker, Vector Search, Multi-Agent Systems, Python, LLM APIs*

Built a local-first autonomous coding agent using a multi-agent state-machine architecture covering planning, execution, and validation phases. Implemented AST-aware semantic retrieval (Tree-sitter + vector DB) for high-precision code context understanding at the symbol level. Designed a self-healing execution loop with **secure Docker sandboxing** and adaptive model routing for reliability and cost efficiency.

Analytics & Ranking Platform *FastAPI, PostgreSQL, Celery, Docker*

Built a scalable backend system to automate official athlete rankings for a sports federation, ensuring full transparency and auditability. Implemented rule-engine logic converting complex ranking criteria into deterministic algorithms, and designed an optimized PostgreSQL schema enabling **fast recomputation for hundreds of athletes**. Integrated Celery for async processing, reducing ranking generation time by **~50%**. Containerized services using Docker for reliable deployment.

Enterprise Event Logistics Platform *FastAPI, PostgreSQL, Microservices, Docker, AWS*

Architected microservice-based backend for managing travel and accommodation workflows in large-scale corporate events. Led Phase 2 backend development, implementing independently scalable booking and user-management services with **zero production downtime**. Built secure REST APIs with FastAPI, deployed services on AWS, and introduced observability tooling to reduce debugging time by **30%**.

AI-Driven Financial Data Platform *FastAPI, PostgreSQL, RAG Pipelines, React*

Developed a backend powering a GenAI chatbot for real-time financial data retrieval using RAG pipelines. Built ingestion & retrieval APIs combining insights from multiple databases, enabling scenario-based financial analysis. Upgraded the prototype to a production-ready architecture with FastAPI backend + React frontend, improving query latency by **25%**.

CERTIFICATION & PUBLICATIONS

- Introduction to Artificial Intelligence (AI) — IBM
- Natural Language Processing with Classification and Vector Spaces — DeepLearning.AI
- **Explainable ML for Peptide Therapeutics** — Co-authored a peer-reviewed study presenting an interpretable machine learning framework for identifying antimicrobial peptide candidates. The model leverages physicochemical properties such as hydrophobicity and dipeptide motifs, and powers the **Pred-AHCP** web server used for therapeutic peptide design and validation. [Published Paper](#) — [Pred-AHCP Web Server](#).