

Vasu Jain

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Skills

- **Languages:** Java, Go, Python, TypeScript, SQL, Shell, Nix
 - **Frameworks:** Spring Boot, FastAPI, Gin, React, Next.js, LangChain, LangGraph
 - **DevOps & Cloud:** Docker, Kubernetes, AWS, GitHub Actions, Ansible, Caddy, NixOS
 - **Databases:** PostgreSQL, MySQL, MongoDB, Redis, Qdrant
 - **Tools:** Linux, Neovim, IntelliJ IDEA, Git, Postman
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Experience

- **Software Engineering Intern – DIPR, DRDO** Jun 2025 – Jul 2025
 - Engineered a secure **Library Management System** using **Spring Boot** and **React**, replacing a legacy system and saving **Rs.1L+ annually** in licensing costs.
 - Designed **Role-Based Access Control (RBAC)** with **Spring Security** and **JWT** for 3 user levels, ensuring compliance with strict **DRDO security standards**.
 - Migrated **12,000+ book records** from unstructured files to structured JSON using a **GenAI pipeline**, reducing data entry time by **95%**.
 - Implemented **barcode generation**, bulk data upload, and deployed the solution on a secure intranet infrastructure.
 - **Open Source Contributor – Palisadoes Foundation** Sep 2023 – Dec 2024
 - Dockerized the **Talawa** platform (Express/GraphQL backend, React frontend), standardizing development environments across the team.
 - Optimized **GitHub Actions CI/CD pipelines** for automated testing and building, significantly reducing deployment friction.
 - Configured **Caddy reverse proxy** for automatic SSL termination and managed deployment on VPS infrastructure.
 - Collaborated with a global distributed team, improving developer onboarding documentation and code quality through rigorous code reviews.
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Projects

- **ShelfWise – Enterprise Library Management System (Live) (GitHub)** Java, Spring Boot, React, Docker
 - Architected a production-ready, **offline-first** library system with a unified **Spring Boot** backend and **React** frontend.
 - Implemented enterprise-grade security with **JWT authentication**, HttpOnly cookies, and granular **RBAC** (Super Admin, Admin, Member).
 - Built a robust **transaction engine** for issuing, returning (with late fee calc), and renewing books, handling complex edge cases.
 - Developed a **CI/CD pipeline** using **GitHub Actions** to build multi-arch **Docker images** and publish them to Docker Hub automatically.
 - Features include **PDF report generation**, custom barcode sheet creation, and bulk CSV data import/export.
 - **Task Genie – AI-Powered Telegram Agent (Live) (GitHub)** Python, FastAPI, LangGraph, MongoDB, Redis
 - Developed an intelligent **Telegram bot** using **LangGraph** and **OpenAI** to manage tasks via natural language conversations.
 - Designed a stateful architecture using **Redis** for FSM and **MongoDB** for persistent conversation memory and user data.
 - Implemented **secure API key storage** using **Fernet encryption** and timezone-aware scheduling for global users.
 - Created a custom **AI agent workflow** with specific tools for CRUD operations on tasks and reminders, ensuring accurate intent recognition.
 - Deployed using **Docker Compose** with a modular architecture separating the bot interface, AI logic, and database layers.
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Education

- **The NorthCap University, B.Tech Computer Science (GPA: 8.79)** Aug 2023 – May 2027
Gurugram, India
- **Shiv Vani Model Sr. Sec. School, 10+2 PCM (84.4%)** Apr 2011 – Apr 2023
New Delhi, India