

# JESSICA AGARWAL

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## SUMMARY

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Computer Science undergraduate focused on building **scalable, production-ready web products**. Experienced across the MERN stack with **secure authentication (JWT, Google/OTP Firebase Auth)**, **Redis caching**, **role-based access control**, and **cloud deployment pipelines**. Recent work includes an **AI Assistant Suite** (Chatbot, Summarizer, JSON Extractor) using Streamlit + LLM APIs and container-friendly dev setups with Docker. Passionate about performance, DX, and delivering real user impact.

## EDUCATION

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### JECRC University

2024 – 2028

*B.Tech – Computer Science and Engineering – CGPA: 9.5/10*

*Jaipur, Rajasthan*

- Specialization: Software Product Engineering with Kalvium

## PROJECTS

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### AI Assistant Suite 📄 | Streamlit, LLM APIs, Python, Docker

- Built a **multi-tool AI productivity platform**: Chatbot, Document Summarizer, and JSON Data Extractor in a unified Streamlit UI.
- Abstracted **LLM provider calls** behind a clean interface (OpenAI-style) for easy model swaps.
- Implemented **prompt templates**, context injection, and structured responses (JSON schemas) to support downstream workflows.
- Configured **.env secrets management** + defensive error handling for missing keys and rate limits.
- Container-ready project layout; documented setup for local Dockerized dev and future cloud deployment.

### HRX: Flexi Workforce Hub 📄 | MERN, Redis, JWT, Google OAuth, Jest, Render

- Full-stack HR management platform with modules for employee records, leave requests, payroll, performance, and document uploads.
- Secured endpoints with **JWT**, **Google OAuth**, and phone **OTP**; enforced **RBAC** across Admin / HR / Employee roles.
- Added **Redis caching** for dashboards, leave data, and sessions with TTL + targeted invalidation; reduced DB load ~60–80%.
- Implemented API rate limits (sensitive: 5 req/min; global: 200 req/15min) to mitigate brute-force and abuse.
- Wrote backend unit tests in **Jest**; integrated **CI/CD** auto-deploys to Render from GitHub.

### E-Commerce Application 📄 | MERN, Redux Toolkit, Tailwind CSS, PayPal API

- Full-stack shop with user auth, product catalog, cart, checkout, address book, and order history.
- Implemented secure **JWT** auth + cookies; integrated **PayPal** and Cash-on-Delivery flows.
- State managed via **Redux Toolkit**; responsive UI in **Tailwind CSS**.

### Personal Portfolio Website 📄 | React.js, Tailwind CSS, Vite, Vercel

- Responsive personal site showcasing skills, projects, and resume; integrated social links and project previews.
- Built with **React + Vite** and **Tailwind**; deployed to **Vercel** with custom domain + CI.

## TECHNICAL SKILLS

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**Languages:** JavaScript, Java, Python

**Frameworks & Libraries:** React.js (Vite), Node.js, Express.js, Redux Toolkit, Tailwind CSS, Streamlit, GraphQL

**Databases:** MongoDB, SQL, Firebase

**DevOps:** Docker (learning), GitHub Actions CI/CD, Render, Vercel

**Services & Tools:** Redis, Cloudinary, Postman, Figma, Canva & PDFKit

**Authentication & Security:** Firebase Auth (Google & OTP), JWT, Google OAuth, RBAC, Rate Limiting

**AI/LLM Integrations:** Prompt Engineering, Structured Outputs (JSON), Summarization, Chat Interfaces

## HONORS AND CERTIFICATION

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- Contributor at GirlScript Summer of Code (GSSoC) 2025 – Open source contributions.
- Led a 6-member team in Smart India Hackathon 2024 Prelims — Project "Virtual Herbal Garden" shortlisted among Top 5 teams nationwide.
- Built a Medicare LLM application at LNM Hacks 7.0 to check drug interactions and enhance patient safety.
- Foundations: Data, Data, Everywhere – Google (Verify)
- Data Science Foundations – Great Learning (Verify)