# Jessica Agarwal

#### **SUMMARY**

Computer Science undergraduate passionate about full-stack development and real-world applications. Experienced in building scalable web platforms with secure authentication, state management, and cloud deployment.

Contributed to HR and e-commerce platforms featuring PayPal integration, Redis caching, and responsive design. Actively learning and applying modern tools to deliver impactful user experiences.

## **EDUCATION**

JECRC University

2024 - 2028

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

Jaipur, Rajasthan

• Specialization: Software Product Engineering with Kalvium

#### **PROJECTS**

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

- Built and deployed a full-stack HR management platform using the MERN stack.
- Secured endpoints with JWT, Google OAuth, and phone OTP; implemented role-based access (Admin/HR/Employee).
- Implemented Redis caching across dashboards, leaves, payroll, and user sessions with TTLs and smart invalidation strategies.
- Reduced backend response time by 66.7% (from 3ms to 1ms) and decreased DB queries by 60–80%.
- Applied API rate limiting: 5 req/min for sensitive routes, 200 req/15min globally—protecting against brute-force and abuse.
- Wrote backend unit tests with Jest for core API routes, improving test coverage and reliability.
- Enabled CI/CD by configuring auto-deployment to Render via GitHub integration.

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

- Built a full-stack e-commerce web application with modular architecture and RESTful APIs for user, product, and order management.
- Executed JWT-based authentication, secure cookie handling, and integrated dual payment methods (PayPal and COD payments).
- Designed features for product CRUD, shopping cart, checkout, address handling, and order history.
- Leveraged Redux Toolkit for state management and styled the frontend using Tailwind CSS; integrated PayPal via the official React SDK.

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

- Built and deployed a personal portfolio to showcase skills, projects, and resume with a clean, responsive layout.
- Used Vite + React with Tailwind for performance and design; deployed via Vercel with custom domain.
- Source code available on GitHub; includes social integration, routing, and live project previews.

## TECHNICAL SKILLS

Languages: JavaScript, Java, Python

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

Databases: MongoDB, SQL, Firebase

Tools & Platforms: Git, GitHub, Postman, Figma, Canva, Vercel, Render, Cloudinary, Redis

Authentication: Firebase Auth, JWT, Google OAuth

## HONORS AND CERTIFICATION

- Led a 6-member team in Smart India Hackathon 2024 Prelims Project "Virtual Herbal Garden" shortlisted among Top 5 teams nationwide.
- Foundations: Data, Data, Everywhere Google (Verify)
- Data Science Foundations Great Learning (Verify)