

UdraKala: Project Showcase Details

The Challenge

Preserving Heritage in a Digital Age.

Odisha's rich tradition of handloom and handicrafts—spun by skilled rural artisans—faces a existential threat from mass-produced imitations and limited market access. The primary challenge was to bridge the gap between these remote artisans and a global audience, removing middlemen to ensure fair pricing while maintaining the authenticity and trust that customers demand. The platform needed to handle complex inventory variants (sarees, fabrics) and provide a seamless, culturally immersive shopping experience.

The Solution

UdraKala: A Direct-to-Consumer Artisan Marketplace.

We built a robust, full-stack e-commerce ecosystem designed for scale and trust. UdraKala connects artisans directly with buyers through a dedicated Seller Panel, allowing them to manage their own digital storefronts.

- **For Buyers:** A premium, high-performance web app with AI-powered assistance, seamless checkout, and transparent tracking.
- **For Artisans:** A simplified mobile-first dashboard to upload products, manage orders, and track payouts.
- **For Ops:** A comprehensive Admin Dashboard to verify seller authenticity, manage logistics, and oversee financial settlements.

Key Features

- **AI Buying Assistant:** Integrated chatbot that suggests products (sarees, decor) based on user preference and budget, and answers shipping/policy queries in real-time.
- **Multi-Role Ecosystem:** Distinct portals for Customers, Sellers (Artisans), and Admins with Role-Based Access Control (RBAC).

- **Smart Product Discovery:** Advanced search and filtering for thousands of unique SKUs, optimized for handloom categories.
- **Trust-First Logistics:** "Pack Order" video upload feature for sellers to prove authenticity and quality before shipping.
- **Automated Payouts:** Financial module for admin to calculate and process seller earnings and delivery agent fees.

Technologies

- **Frontend:** React.js, Vite, Tailwind CSS (Glassmorphism UI), Framer Motion (Animations).
- **Backend:** Java Spring Boot, Spring Security (JWT Auth), Hibernate/JPA.
- **Database:** MySQL.
- **AI/Chat:** Custom keyword-based Intent Engine, integrated with product database.
- **Tools:** Maven, Git, Postman.

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