

E-Commerce Platform – Shoes Collection

Full One-Page MERN Stack Case Study

Overview

Developed a full-stack e-commerce platform for local businesses, enabling digital product listing, secure order processing, and seamless customer shopping experience using the MERN stack.

Problem → Solution

Local businesses often lack scalable online selling platforms. This project provides a complete e-commerce solution with a secure admin panel, real-time inventory control, and user-friendly interface.

Technology Stack

Frontend	React.js
Backend	Node.js & Express.js
Database	MongoDB
Security	Single-IP Restricted Admin Panel
Features	Cart, Orders, Inventory Management

System Workflow

- User browses products and adds items to cart
- Secure checkout and order placement
- Admin panel manages inventory and orders
- Orders stored and tracked in MongoDB
- Role-based access controls admin features

Challenges & Debugging

Handled state management complexities, secure admin access, and API integration issues. Solved using structured API design, environment-based security, and component-level debugging.

Outcome & Skills Gained

- End-to-end production-ready e-commerce platform
- Secure admin and client workflows
- Strong MERN stack implementation skills
- Experience building scalable web applications