**Tech Stack Overview**

**Frontend Framework**

* **Next.js 15.5** - React-based full-stack framework with App Router
* **React 18.3** - UI library
* **TypeScript 5.9** - Type-safe JavaScript

**Styling & UI**

* **Tailwind CSS 3.4** - Utility-first CSS framework
* **shadcn/ui** - Component library built on Radix UI primitives
* **Radix UI** - Headless, accessible UI components
* **Lucide React** - Icon library
* **Tailwind Animate** - Animation utilities

**Backend & Database**

* **MySQL 3.14** - Primary database with mysql2 driver
* **Next.js API Routes** - Server-side API endpoints
* **Node.js** - Runtime environment

**Authentication & Security**

* **JWT (jsonwebtoken)** - Token-based authentication
* **bcryptjs** - Password hashing
* **Custom middleware** - Route protection

**Forms & Data Management**

* **React Hook Form 7.54** - Form handling with validation
* **Zod 3.24** - Schema validation
* **@hookform/resolvers** - Form validation integration

**State Management & Data Fetching**

* **SWR 2.3** - Data fetching and caching
* **TanStack React Query 5.66** - Server state management
* **React Context** - Client-side state management

**File Handling & Storage**

* **UUID 9.0** - Unique identifier generation
* **Custom file upload system** - Image storage and management
* **Buffer handling** - File processing

**Data Visualization**

* **Recharts 2.15** - Chart and data visualization library

**Development Tools**

* **TypeScript** - Static type checking
* **ESLint** - Code linting
* **PostCSS** - CSS processing
* **ts-node** - TypeScript execution
* **patch-package** - NPM package patching

**Deployment & Infrastructure**

* **Production ready** - Built for deployment
* **PM2** - Process management (based on logs)
* **Nginx** - Web server/reverse proxy
* **Environment configuration** - .env files

**Key Features**

* **E-commerce platform** - Product management, sales tracking
* **Admin dashboard** - Analytics, inventory, customization
* **Image management** - Banner uploads, product images
* **User authentication** - Admin login system
* **Database migrations** - Schema management
* **Responsive design** - Mobile-friendly UI

**Architecture Pattern**

* **Full-stack Next.js** - Server-side rendering and API routes
* **Component-based architecture** - Reusable UI components
* **Type-safe development** - End-to-end TypeScript
* **Modern React patterns** - Hooks, context, server components