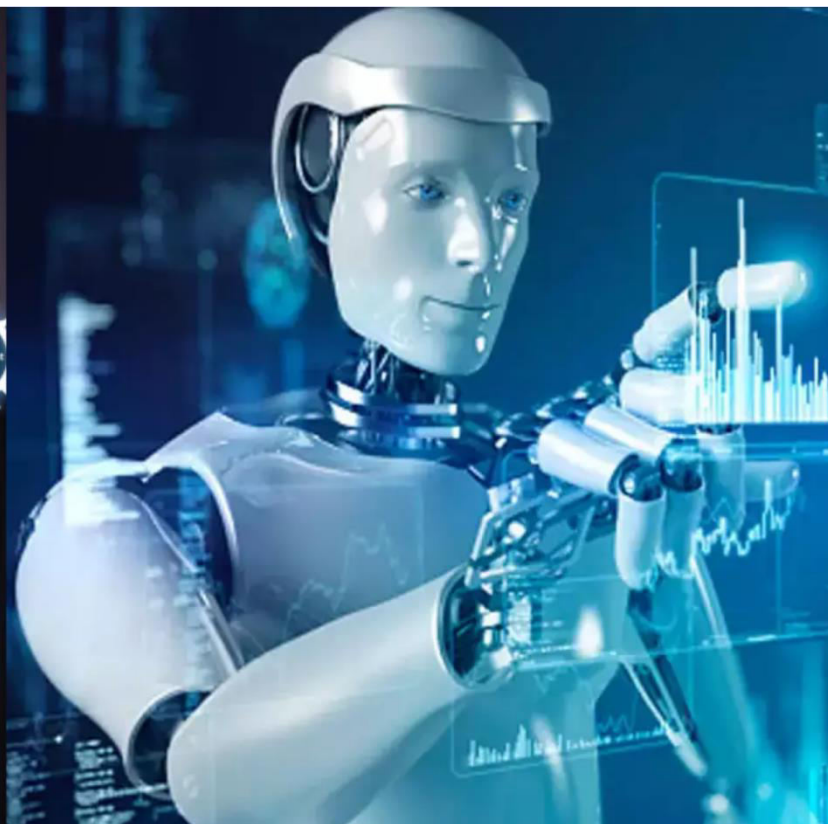




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Developing a Dynamic and Responsive Fashion E-Commerce Website using MERN Stack

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ABSTRACT: The sudden growth of eCommerce has revolutionized the fashion sector, providing online shopping with greater accessibility, convenience, and efficiency. As consumers increasingly demand digital shopping experiences, companies need to implement user-friendly, scalable, and secure platforms to remain competitive. This research paper outlines the creation of a Fashion eCommerce Website, intended to provide an effortless shopping experience for users and effective product and order management for administrators. The site enables users to browse through a wide variety of fashion items, narrow down products according to Men, Women, and Children categories, and narrow their searches further through sorting features such as price (low to high, high to low) and relevance. Users can place items in their cart, choose sizes and quantities, make secure online payments, and monitor their orders in real time. The site also has an admin module, which allows administrators to add, edit, and delete products, categorize products, manage user orders, track payment status, and change order status as required. Built with contemporary web technologies, the system is responsive, scalable, and secure, with features like payment encryption, secure authentication, and effective database management. This paper discusses the platform's architecture, functionalities, and deployment, highlighting its capacity to boost user engagement, simplify administrative processes, and enhance business efficiency. Future upgrades can involve AI-powered product suggestions, customer service through chatbots, multi-payment gateway support, and real-time order tracking enhancement to further refine the user experience and operational efficiency.

KEYWORDS: ECommerce, Fashion Retailing, Online Shopping, Product Management, Order Tracking, Secure Payment Gateway, User Authentication, Admin Dashboard, Product Filtering, Customer Experience, Digital Transaction.

I. INTRODUCTION

The transformation of eCommerce has played a very prominent role in the fashion world, allowing businesses to connect to a larger pool of consumers and making it convenient for consumers to have a smooth shopping experience. With the ever-growing trend of online shopping, consumers now use the internet because of its accessibility, convenience, and variety. Our Fashion eCommerce Site is geared towards fulfilling this increased demand through providing an easy-to-use interface through which the clients can browse an assortment of fashion products such as clothing, footwear, and accessories. Unlike common shopping styles, this site comes with superior filtering and sorting tools that enable one to select items by Men, Women, and Children and further narrow them down by Topwear, Bottomwear, and Winterwear. The system provides an effortless navigation process, enabling customers to locate their desired fashion products in a time-efficient manner with a safe and hassle-free online buying process.

The admin module is one of the most distinctive features of the site, providing the administrator the capability to operate products and orders smoothly. Admins can insert, modify, and delete products and their pictures, descriptions, sizes, prices, and categories. Moreover, administrators can label items as bestsellers to indicate trendy fashion. The admin panel also offers features to monitor user orders, verify payment statuses, and view customer information, such as addresses and contact numbers. Another important functionality is the update order status feature, which ensures efficient order processing and delivery management. By providing a properly organized backend system, the platform simplifies inventory management, minimizes manual labor, and increases operational efficiency for entrepreneurs.

For customers, the platform offers an interactive and feature-rich shopping experience with various customization and convenience features. Customers can register accounts using user authentication features like sign-up, login, and logout to protect their details. They can search products by name and narrow down their selection with sorting features like price (low to high or high to low) and relevance. The site also has separate About Us and Contact Us pages to offer basic business information and customer support. Customers can add products to cart, choose sizes and quantities, and complete a secure online payment system. Checkout is facilitated by the entry of mandatory information such as address, mobile number, and pincode to provide a hassle-free order placement experience. Customers can also trace their orders, track their status, and view bestsellers, keeping them updated on current trends.

Summarily, this Fashion eCommerce Website is a complete, scalable, and secure online shopping portal that maximizes user experience as well as business processes. The synergy of a user-friendly shopping interface and an effective admin panel makes managing fashion products and orders a breeze. Not only does the system enable smooth transactions, but it also maximizes inventory monitoring, customer engagement, and business workflow. Additional enhancements in the future can be AI-powered product suggestions, chatbot-powered customer support, multiple payment gateway support, and in-depth analytics to further boost the functionality and usability. This research study examines the system design, development, and influence, illustrating how an effectively designed eCommerce platform can transform online fashion shopping.

II. RELATED WORK

Fashion online commerce has seen vast popularity over the past few decades, with resulting comprehensive research regarding multiple areas, including consumer behaviour, price, globalisation, and sustainability. The blending of online platforms with sophisticated algorithms changed the way individuals interact with apparel brands, which made internet retailing more digital and data-friendly. Multiple papers have discussed aspects related to motivators for customers to participate, as well as how companies execute strategies to further improve their workings in the retail sector in terms of online offerings.

Consumer choice in fashion online shopping is greatly impacted by personal engagement, social influence, and product diversity. An experiment based on the Stimulus–Organism–Response (S-O-R) model explores the effect of fashion involvement, opinion-seeking, and product variety on consumer purchasing behavior. The results indicate that although fashion involvement and product diversity strongly contribute to perceived quality, opinion-seeking has little effect on purchase intentions [Citation 1]. These insights help e-commerce businesses refine their marketing and product display strategies to maximize engagement.

One of the most important subjects to be researched in fashion e-commerce is price optimization. Pricing methods are most important for generating revenue, particularly in a competitive online environment. Studies on machine learning-based price models indicate that maximization of discount percentages dependent on up-to-date consumer demand can increase overall profit and revenue margins [Citation 2]. Dynamic pricing models used allow e-commerce websites to change prices dependent on demand changes, seasonal patterns, and consumer behavior, thereby boosting profitability.

The effect of e-commerce adoption on business performance has similarly been extensively researched. A study explores the link between operational efficiency and the implementation of e-commerce, specifically in the fashion sector. The study discovers that although e-commerce adoption improves innovation performance, it does not necessarily lead to improved business or operational performance. In addition, international expansion can pose further challenges like logistical complexity and diverse consumer demand that can impact overall performance in a negative manner [Citation 3]. This underlines the need for an effective international expansion strategy to counterbalance possible disadvantages. Aside from pricing and operational performance, consumer behavior and the impact of social media have been an essential area of study. A research on sustainable fashion online shopping examines the influence of social media interaction on consumer behavior, especially in terms of sustainability. Results show that content related to sustainability generates more user interactions in the form of likes and comments, while price-related content generates more shares and conversations [Citation 4]. This implies that sustainability-oriented brands should strategically use social media to increase consumer interaction and brand loyalty.

Lastly, studies on fashion e-commerce adoption in the Gulf Cooperation Council (GCC) nations offer insights into

regional consumer behavior and attitudes. The research investigates how trust, ease of use, and perceived usefulness affect online shopping behavior. Surprisingly, age and education levels are moderating factors, whereas gender, income, and work location have little influence on e-commerce adoption [Citation 5]. These results can be used to customize strategies to various audiences, so that various consumer segments have an effortless shopping experience.

In all, these studies shed light on the changing fashion e-commerce scenario. From price strategy to consumer decision-making and social media influence, through regional adaptation trends, the research points to the numerous challenges and opportunities that companies need to overcome to be successful in the online fashion business.

III. PROPOSED SYSTEM

System Overview:

1. **Purpose & Objectives:** The intention of this online shopping system for fashion e-commerce is to facilitate a smooth and effective online buying platform where the users can navigate, sort, and buy garments easily. The system seeks to improve customer satisfaction through an intuitive interface, safe payment handling, and effective order tracking. Moreover, it makes backend processes run smoothly for the administrators so they can manage product listings, track orders, and monitor customer transactions. The system is intended to meet the increasing need for fashion retail online and enhance overall business efficiency and customer satisfaction.

The key objectives are:

- 1) Streamlined Product Management – Allow administrators to add, update, delete and classify products with ease, including bestsellers, to enhance the shopping experience.
 - 2) Advanced Filtering & Sorting – Allow users to filter by category (Men, Women, Children) and sort by product type (Topwear, Bottomwear, Winterwear), as well as price.
 - 3) Seamless Payment and Order Processing – Integrate secure and streamlined checkout procedures with online payments, enabling users to input delivery information like address, mobile number, and pincode.
 - 4) User Authentication and Account Management – Provide secure login, signup, and logout features for customized user experiences and tracking of order history.
 - 5) Improved User Experience – Provide a clean and user-friendly interface where users can browse bestsellers, search for products by product name, and freely jump between various sections like the About Us and Contact Us pages.
 - 6) Streamlined Admin Dashboard – Provide an admin module where payment status, order details, and customer information are listed, enabling the admin to update order status and manage product stock effectively.
 - 7) Order Tracking for Users – Permit users to trace their ordered goods in real time, enhancing visibility and less uncertainty about deliveries.
 - 8) Scalability & Security – Make sure the system supports scalability for expanding in the future and includes robust security features for safeguarding user information and transactions.
2. **Target Users:** The suggested fashion online commerce system is for two primary user groups: Admins and Customers. Both groups have their own roles and features within the system to facilitate easy operations and provide a streamlined shopping experience.
 - 1) **Admin:**
The Admin oversees the backend processes of the website to make products available, process orders, and provide customers with a hassle-free shopping experience. The admin can access:
 - 1) **Product Management:** Add products with information like name, images, description, sizes, price, and categories (Men, Women, Children).
 - 2) **Bestseller Management:** Flag certain products as bestsellers to identify top-selling and high-demand products.
 - 3) **Product Removal:** Delete old or out-of-stock products from the site.
 - 4) **Order Management:** Display all orders placed, including user information, payment status, and shipping details.
 - 5) **Order Status Updates:** Update order status (e.g., Pending, Processing, Shipped, Delivered) to keep customers

updated.

- 6) User & Payment Tracking: Track settled payments and keep track of customer information like addresses and contact numbers.

2) Customer:

The Buyer is the end user who accesses the site to view, buy products, and monitor orders. The buyer can:

- 1) User Authentication: Register, login, and logout securely.
- 2) Product Browsing & Filtering: Shop through fashion categories (Men, Women, Children) and filter based on clothing type (Topwear, Bottomwear, Winterwear).
- 3) Sorting Options: Sort products by relevance, price (low to high, high to low), and bestsellers.
- 4) Search Functionality: Search for specific product names.
- 5) Cart Management: Add desired products to cart with selected sizes and quantities.
- 6) Checkout & Payment: Provide shipping details (address, mobile number, pincode) and secure online payments.
- 7) Order Tracking: See order history and monitor order status in real-time.

3. System Architecture:

Component	Interaction with Application Server	Relationship Type	Data Exchanged
Sign-Up Page	Sends registration data	Data Flow	User details (name, email, password, address, phone number)
Login Page	Sends login credentials	Data Flow	Email, password
Home Page	Requests product data	Data Flow	Product list, categories, bestseller items
Product Page	Sends product selection request	Data Flow	Product ID, size, quantity
Cart Page	Sends cart data for checkout	Data Flow	Product details (ID, size, quantity), user ID
Checkout Page	Sends order and payment details	Data Flow	Shipping address, phone number, payment status
Order Tracking Page	Requests order details	Data Flow	Order ID, order status
Admin Dashboard	Sends product/order/user management requests	Data Flow	Product details, user orders, payment information
Database	Stores and retrieves data	Data Flow	User data, product details, order records, payment transactions
Authentication Module	Verifies user credentials	Data Flow	Email, password

4. Functional Description:

User Interface (Admin Interface):

The admin interface is highly user-friendly and effective, and it facilitates hassle-free management of products, orders, and customers. It possesses the following prime functionalities:

- Dashboard: The dashboard offers a glance of total orders, products, revenue, and customer activity. It features easy-to-use access buttons to travel through product administration, order fulfillment, and user information.
- Product Management:
 - Add Product: Admins can add a new product by filling in details like name, description, price, size, category, and product images.

Edit Product: Provides for editing existing product details, including price adjustments, size availability, and category modifications.

Delete Product: Admins can delete any listed product that is out of stock for sale.

Best Seller Management: The admin can identify certain products as best sellers to feature them on the customer interface.

- Order Management:
View Orders: Shows all the user orders with information such as product name, quantity, price, and user details.
Change Order Status: Admins are able to modify the order status (Pending, Shipped, Delivered, or Canceled).
Payment Verification: Checking whether the payment is done or pending for each order is provided in the system.
- User Management:
View Orders: Shows all the user orders with information such as product name, quantity, price, and user details.
Change Order Status: Admins are able to modify the order status (Pending, Shipped, Delivered, or Canceled).
Payment Verification: Checking whether the payment is done or pending for each order is provided in the system.
User Management:
View Users: Admins can view registered users along with their names, contact information, and order history.
Manage User Accounts: Admins can deactivate or update user accounts if necessary.

User Interface (Customer Side):

The customer interface is built to provide a seamless shopping experience with simple navigation and product discovery. It comprises the following main functionalities:

- User Authentication:
Sign-Up Page: New users can sign up by entering their name, email, and password. The data is stored securely by the system, and a verification email can be sent for confirmation.
Login Page: Users who have signed up can log in with their email and password. After successful authentication, they are taken to the home page.
- Home Page: Shows featured categories, best sellers, and offers. Has a search bar to enable users to search for products by name.
- Product Listing & Filtering:
Category Filters: Products can be filtered based on category (Men, Women, Children) and type (Topwear, Bottomwear, Winterwear).
Sorting Options: Products can be sorted in relevance, price (low to high, high to low).
- Product Details Page:
Displays product images, description, price, sizes available, and reviews from customers.
Size and quantity can be chosen by the user before adding the product to cart.
- Shopping Cart:
Displays selected products with quantity, price, and total order value.
Customers can delete or edit items prior to checkout.
- Checkout Page:
Address Input: Customers input their delivery address, mobile number, and pincode.

Payment Gateway: Customers can make payment through online payment options.

- Order Management:
Order History: Shows previous and existing orders along with order information.
Order Tracking: Customers can view the status of their orders from order placement to delivery.
- Additional Features:
Best Seller Section: Introduces top selling items in order to grab the attention of customers.
About Us & Contact Page: Presents company information and customer support information.

5. Data Management:

The system uses MongoDB Atlas, a cloud-hosted NoSQL database service, to store user and order data in an efficient manner. Data is organized in a cluster called "eCommerceDB", which has the following main collections:

Collections in MongoDB Atlas:

- Users Collection:
Stores user authentication information and personal details. Fields are user_id (unique identifier), name, email, password (hashed), phone number, address, and order history. The email field is used as the unique identifier for a user.
- Products Collection:
Holds product information uploaded by the admin. Columns contain product_id, name, description, price, available sizes, quantity in stock, category (Men, Women, Children), and bestseller.
- Orders Collection:
Keeps data regarding customers' orders. Columns contain order_id, user_id (references to Users Collection), product_id (reference to Products Collection), quantity, total_price, payment status, shipping address, and status of order (Pending, Shipped, Delivered, Canceled).
- Admin Collection:
Stores the credentials for admin operations for operating the site. Columns contain admin_id, name, email, password (hashed), and role.

Data Security Measures:

- Access Control:
Role-based access control (RBAC) limits database access. Only authorized admins can edit product listings, handle orders, or access private user data.
- Data Encryption:
Data at rest and in transit is encrypted through TLS/SSL protocols. Passwords are hashed before they are saved to ensure no one else can gain entry.
- Routine Backups:
MongoDB Atlas offers automated backups so data loss is avoided. Backups are maintained on a regular schedule so that data can be recovered in the event of accidental deletion or system crashes.

Technology Used:

- Frontend:
Languages: HTML, CSS, JavaScript
Framework/Library: React.js
Styling: Tailwind CSS
- Backend:
Languages: JavaScript
Framework: Node.js with Express.js
Database: MongoDB Atlas
- Cloud Services & APIs:
Cloud Storage: Cloudinary (for image storage)
Payment Gateway: Stripe (for secure online transactions)
- Other Tools:

Version Control: Git (GitHub)

Package Manager: npm

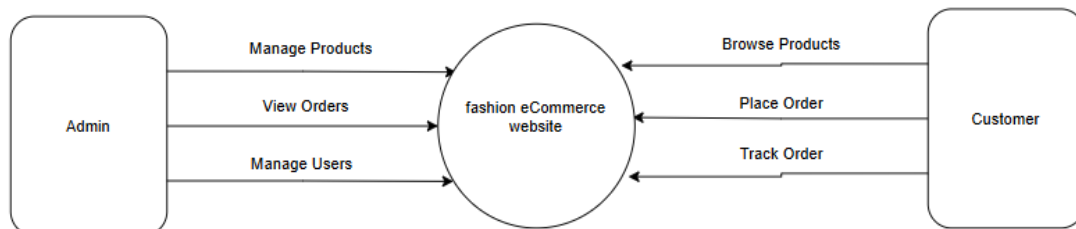
Testing Frameworks: Selenium (UI testing)

IDE/Code Editor: Visual Studio Code

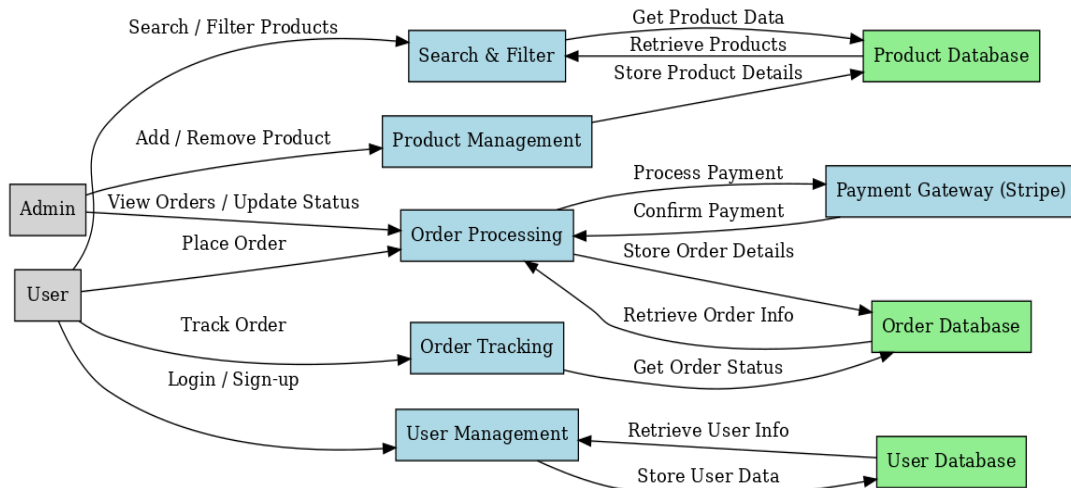
6. Development Process: The evolution of the fashion eCommerce website took the Waterfall model, with a systematic and sequential process wherein each step was finished before moving on to the next one. It started with requirement analysis, wherein the primary functionalities like user authentication, product management, order handling, and integration with payment were established, along with choosing technologies such as React.js, Node.js, MongoDB, Express.js, Cloudinary, and Stripe. During the system design phase, the system architecture, UI design, and database schema were designed. During the implementation phase, the frontend was built with React.js and Tailwind CSS, the backend with Node.js and Express.js, Stripe for secure payments integration, and Cloudinary for storing images. Comprehensive testing was performed using Selenium (UI automation) to make it a seamless experience. Lastly, the platform was hosted on Heroku, and future maintenance, database backups, and security updates were scheduled to be done to improve it further. This structured Waterfall method provided a properly documented and stable development process.
Frequent Testing: Testing was integrated throughout the development process, including unit tests, integration tests, and user acceptance testing.

IV.SYSTEM DIAGRAM

- DFD Diagram:
 - 1) Context Level (Level 0): Level 0 DFD, also referred to as the Context Diagram: This is an abstract representation and system view at the highest level.



- 2) Level 1 DFD Diagram: A Level 1 Data Flow Diagram (DFD) is the first level of decomposition of the Context Diagram (Level 0). It takes the single process representing the entire system in the Level 0 DFD and breaks it down into its major sub-processes.

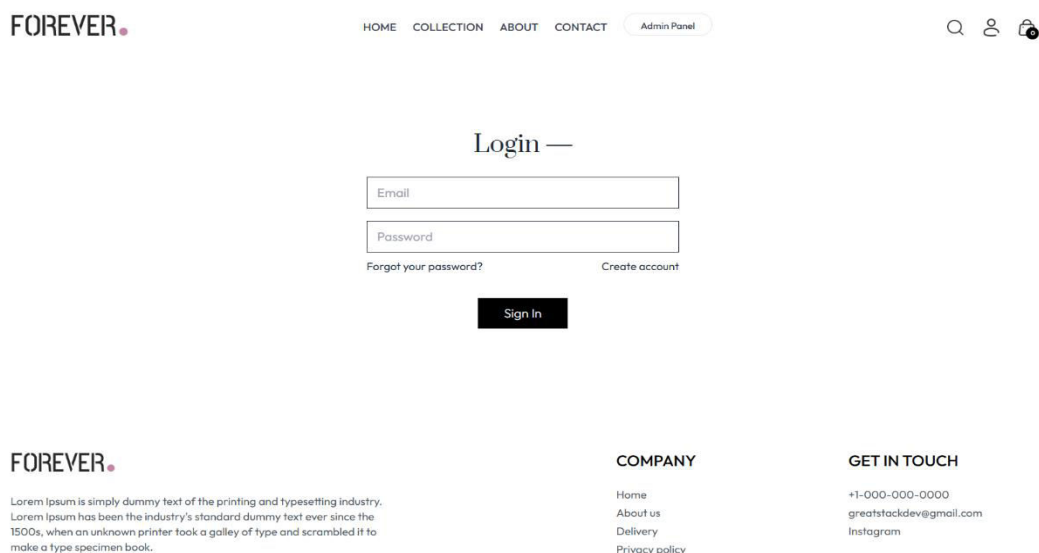


V. RESULT

This section introduces the most important pages of the fashion eCommerce website and demonstrates its interface and features.

Login Page:

Figure 1 illustrates the login page, where customers input their credentials (email and password) to gain access to the system.

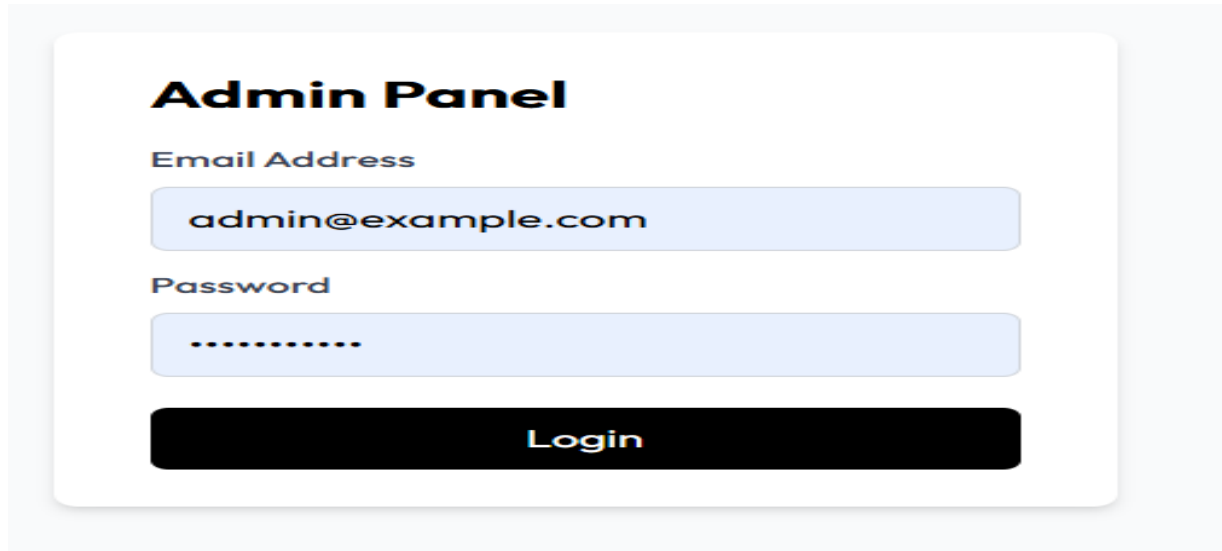


The screenshot shows the login page for 'FOREVER'. The page has a navigation bar with links: HOME, COLLECTION, ABOUT, CONTACT, and an Admin Panel button. Below the navigation bar is a search icon, a user icon, and a shopping cart icon. The main content area is titled 'Login' and contains a form with fields for 'Email' and 'Password'. Below the password field are links for 'Forgot your password?' and 'Create account'. A 'Sign In' button is at the bottom of the form. The footer contains the 'FOREVER' logo, a 'COMPANY' section with links to Home, About us, Delivery, and Privacy policy, and a 'GET IN TOUCH' section with contact information: +1-000-000-0000, greatstackdev@gmail.com, and Instagram.

Figure-1: Customers Login

Admin Login Page:

Figure 2 illustrates the admin login page, accessible only to authorized administrators.



Admin Panel

Email Address

admin@example.com

Password

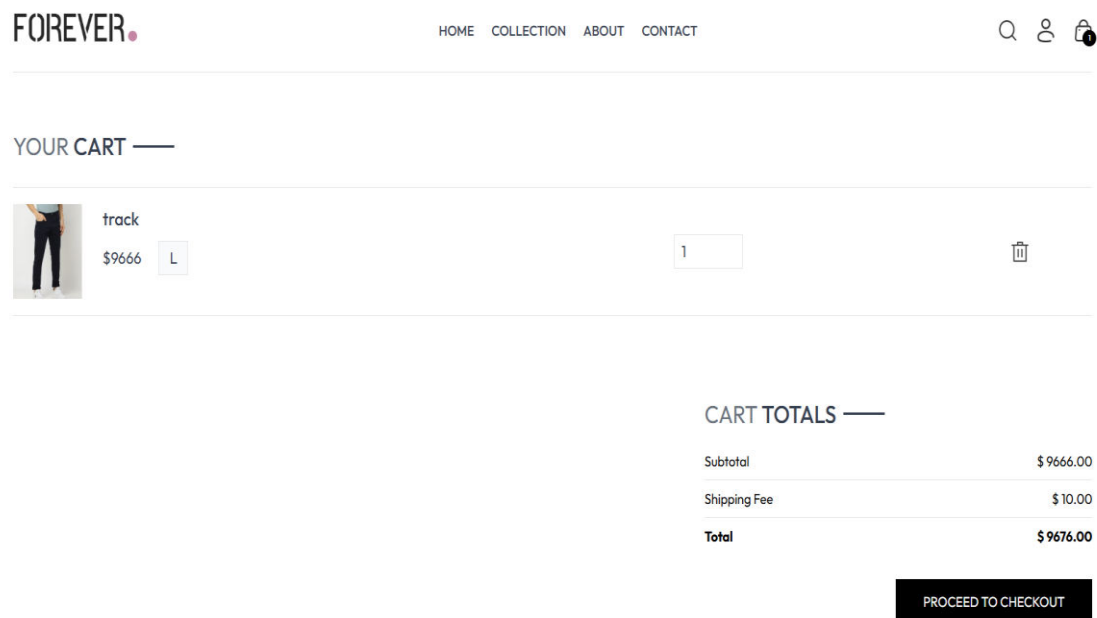
.....

Login

Figure-2: Admin Login Page

Order Checkout Page:

Figure 3 displays the page where customer can buy their cloths and make a payment.



FOREVER.

HOME COLLECTION ABOUT CONTACT

Q U L

YOUR CART —

	track	\$9666	L	1	
---	-------	--------	---	---	---

CART TOTALS —

Subtotal	\$ 9666.00
Shipping Fee	\$ 10.00
Total	\$ 9676.00

PROCEED TO CHECKOUT

Figure -3: Order Checkout Page

VI. CONCLUSION

This eCommerce fashion website development has effectively established a strong platform for both the administrators and the users, which has ensured an uninterrupted online shopping experience. The system allows the administrators to effectively manage product listings, categorize products, and track user orders, while the customers enjoy a simple interface to browse, filter, and buy products. The incorporation of core features like authentication,

cart management, order tracking, and secure online payment processing guarantees that users shop with confidence. Moreover, the use of a bestsellers section maximizes product visibility, allowing customers to easily find popular fashion products.

One of the most significant accomplishments of this project is the incorporation of MongoDB Atlas as a cloud database solution, guaranteeing scalability and real-time data management. The frontend has React.js implemented, which offers a responsive and dynamic user interface, whereas Node.js with Express.js on the backend offers high-performance API management. Cloudinary maximizes media handling through efficient image storage and retrieval as well as optimized product images for an improved shopping experience. Payment transactions are secure through Stripe, ensuring encrypted and trustworthy payment processing and an added touch of security and trust for users.

From the point of view of development, the project adheres to a methodical software engineering practice with unambiguous system structure and clearly identified functionalities. Use of a systematized admin module makes for easy business functions with the ease to track sales, manage orders, and alter product stock quantities. For the customers, filtering and sorting functionality for products along with search, as well as tracking order details, make it user-friendly and accessible. The system is also scalable, enabling the addition of future features like AI-driven product recommendations, multi-vendor integration, and personalized shopping.

In summary, this fashion eCommerce site not only fulfills the basic requirements of an online shopping site but also lays a good foundation for future enhancements. With its intuitive interface, secure payment system, effective database management, and scalable framework, the system can potentially handle an expanding customer base. Subsequent versions of the project could involve the addition of sophisticated features like AI-based recommendations, chatbot assistance, and augmented reality (AR) based virtual try-ons for products. Overall, this project is an important step towards building a competitive and innovative eCommerce solution for the fashion sector.

VII. FUTURE WORK

In order to make the fashion eCommerce website more functional and user-friendly, a formal development plan is outlined. This plan prioritizes important changes in the short-term, mid-term, and long-term.

Short-Term (0-6 Months):

Development of Mobile Applications: Develop native iOS and Android applications for ease of access with push notifications for updates on orders.

Improved Security Features: Install Two-Factor Authentication (2FA) and encrypt customer information for secure transactions.

Enhanced Order Management: Automate inventory updates and support real-time tracking for improved stock management.

Mid-Term (6-12 Months):

AI-Based Product Suggestions: Activate a suggestion mechanism on the basis of user browsing and buying behavior.

Augmented Reality (AR) Try-On: Create an AR feature that enables users to virtually try before buying.

Sleek Integration with Logistics Partners: Automate shipping and order fulfillment updates through integration with courier services.

Long-Term (12+ Months):

Voice Commerce Integration: Allow customers to browse and order products through voice commands.

Blockchain for Secure Transactions: Apply blockchain payment verification for increased security.

Sustainability Initiatives: Add green packaging and AI-based sustainable fashion suggestions.

REFERENCES

- [1] Ahmed Alanadoly, Sherine Salem – Fashion Involvement, Opinion-Seeking, and Product Variety as Stimulators for Fashion E-Commerce: An Investigated Model Based on S-O-R Model
<https://www.emerald.com/insight/content/doi/10.1108/APJML-06-2021-0447/full/html>.
- [2] Sajan Kedia, Samyak Jain, Abhishek Sharma – Price Optimization in Fashion E-Commerce
<https://arxiv.org/abs/2007.05216>
- [3] Lara Macchion , Alessandra M. Moretto, Fabio Caniato, Monica Caridi, Patrizia Danese, Andrea Vinelli – International E-Commerce for Fashion Products: What Is the Relationship with Performance?
<https://www.emerald.com/insight/content/doi/10.1108/ijrdm-11-2015-0171/full/html>
- [4] Zheng Shen – Mining Sustainable Fashion E-Commerce: Social Media Texts and Consumer Behaviors
https://www.researchgate.net/publication/352828712_Mining_sustainable_fashion_e-commerce_social_media_texts_and_consumer_behaviors
- [5] Praveen Rao, Naga S. Vihari, Syeda S. Jabeen – E-Commerce and Fashion Retail Industry: An Empirical Investigation on the Online Retail Sector in the Gulf Cooperation Council (GCC) Countries
<https://aisel.aisnet.org/iceb2020/37/>
- [6] K. J. Ferreira, B. H. A. Lee, and D. Simchi-Levi, "Analytics for an Online Retailer: Demand Forecasting and Price Optimization," *Manufacturing & Service Operations Management*, vol. 18, no. 1, pp. 69-88, 2016. [Online]. Available: <https://pubsonline.informs.org/doi/abs/10.1287/msom.2015.0561> PubsOnLine
- [7] P. Harsha, S. Subramanian, and M. Ettl, "A Practical Price Optimization Approach for Omnichannel Retailing," *INFORMS Journal on Optimization*, vol. 1, no. 1, pp. 52-70, 2019. [Online]. Available: <https://pubsonline.informs.org/doi/10.1287/ijoo.2019.0018> PubsOnLine
- [8] "Hypocritical Gen Z Can't Stop Buying This Planet-Destroying Product: Study," *New York Post*, Oct. 2, 2024. [Online]. Available: <https://nypost.com/2024/10/02/lifestyle/hypocritical-gen-z-cant-stop-buying-this-planet-destroying-product/>
- [9] "Haul Culture is Fuelling Returns. What Can Brands Do?," *Vogue Business*, Dec. 15, 2024. [Online]. Available: <https://www.voguebusiness.com/story/consumers/haul-culture-is-fuelling-returns-what-can-brands-do> Vogue Business
- [10] "How Temu Took Down Aussie Pioneer," *News.com.au*, Feb. 10, 2025. [Online]. Available: <https://www.news.com.au/finance/business/retail/how-international-retailers-shein-temu-and-amazon-are-changing-ecommerce/news-story/634b209f25c1730ef4f347ce1ade8b5fnews>
- [11] "Overconsumption: Can We Ever Put the Genie Back in the Bottle?," *Vogue Business*, Sept. 30, 2024. [Online]. Available: <https://www.voguebusiness.com/story/sustainability/overconsumption-can-we-ever-put-the-genie-back-in-the-bottle> Vogue Business
- [12] K. J. Ferreira, B. H. A. Lee, and D. Simchi-Levi, "Analytics for an Online Retailer: Demand Forecasting and Price Optimization," *MIT Open Access Articles*, 2015. [Online]. Available: <https://dspace.mit.edu/handle/1721.1/101783> Dspace



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