

## E-COMMERCE WEBSITE WITH CHATBOT INTEGRATION (ZENZWEAVE)

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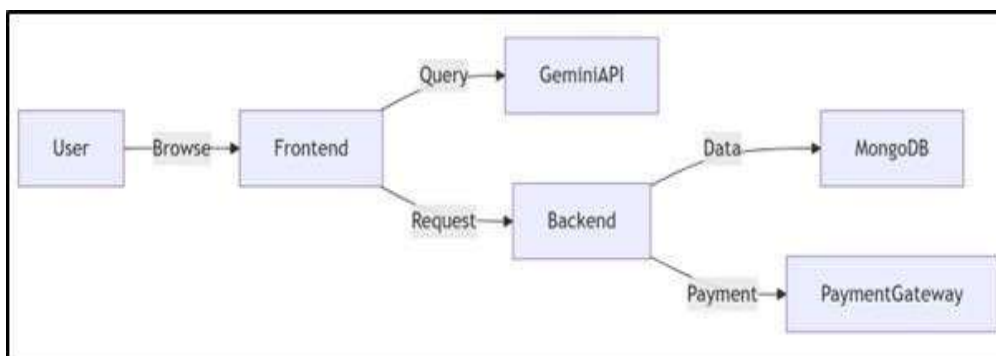
### ABSTRACT

This paper presents the design and development of "Zenzweave", a smart and responsive e-commerce platform built specifically for a clothing brand. The website is developed using HTML, CSS, JavaScript, Bootstrap for the frontend, PHP for backend logic, and MySQL as the database. A key highlight of this system is the integration of Google Gemini 2.0 API, which powers the AI-based chatbot for real-time customer interaction and query resolution. Several add-on features such as payment gateway, wishlist, review system, quantity control, and dynamic pricing based on size make this platform scalable, user-friendly, and ready for real-world use.

**Keywords:** E-commerce, Chatbot, PHP, MySQL, AI Integration, Clothing Brand, User Experience

### 1. INTRODUCTION

The rapid growth of online shopping has made ecommerce an essential part of modern retail. However, most platforms either rely heavily on manual customer support or lack intelligent interactivity. This paper introduces "Zenzweave", a next-generation fashion ecommerce website that not only allows users to browse and purchase apparel but also interact with a smart AI chatbot. The chatbot is integrated using Google Gemini 2.0, enhancing the user experience by offering instant support. The platform aims to provide a seamless shopping journey on any device with modern UI/UX features and essential business functionalities.



**Figure 1:** ZenzWeave Website Architecture

### 2. PROBLEM STATEMENT

Many small-scale e-commerce websites suffer from limitations like poor customer engagement, lack of real-time support, and limited personalization. These issues often lead to user frustration, increased cart abandonment, and low conversion rates. Traditional chat support is not scalable and can be costly for startups. There is a need for a lightweight, intelligent system that can automate user assistance and provide additional shopping features to improve overall satisfaction.

### 3. OBJECTIVES

- To develop a responsive e-commerce platform using standard web technologies.
- To integrate an AI-powered chatbot using Google Gemini API for instant customer support.
- To implement essential features like cart, payment, wishlist, and reviews.
- To enhance user engagement and experience across devices.

### 4. SYSTEM ARCHITECTURE

The system follows a client-server model. The frontend is built using HTML, CSS, JavaScript, and Bootstrap to ensure responsiveness. The backend is written in PHP, which handles business logic and interacts with a MySQL database for storing product, user, and order data.

The AI chatbot is integrated using Google Gemini 2.0 API, which processes user queries and provides intelligent responses in real-time. Add-on features like dynamic pricing based on size, product wishlist, and review system are also included. The payment gateway is simulated to complete the purchase experience.

#### ADD-ON FEATURES

- Payment Gateway: Simulated for a complete shopping experience.
- Add to Cart & Quantity Control: Users can add multiple items and adjust quantities.
- Dynamic Pricing Based on Size: Prices change based on size selection.
- Wishlist: Allows users to save favorite products.
- Product Review System: Enables users to give feedback and rate items.

### 5. RESULTS AND OBSERVATIONS

The platform was successfully tested on multiple devices and browsers. The chatbot responded well to most customer queries. Add-on features enhanced engagement and improved the shopping flow. Compared to initial expectations, the final output delivered a smoother and more interactive experience, proving the success of the project goals.

### 6. FUTURE SCOPE

The project can be enhanced by adding voicebased chatbot input, multilingual support, order tracking APIs, and machine learning-based product recommendations. The current architecture allows easy scalability to integrate these features in future updates.

### 7. CONCLUSION

Zenzweave demonstrates how integrating AI with traditional web technologies can lead to a powerful and user-friendly e-commerce platform. The combination of smart features and responsive design ensures a better shopping experience, especially for modern fashion consumers. The project lays a strong foundation for building AI-driven e-commerce systems in the real world.

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