



WEDINK – BRIDGING INVITATION DREAMS WITH DESIGN

¹Shivam Gupta, ²Sumit Kumar Vishwakarma, ³Er. Aayush Singh, ⁴Er. Ratan Rajan

¹Student, ²Student, ³Assistant Professor, ⁴Assistant Professor

¹Department of Computer Science and Engineering

¹Shri Ramswaroop Memorial College of Engineering and Management Lucknow, India

Abstract—During the last few years, many traditional marketplaces have undergone rapid digital transformation, whereas most of the processes of the invitation card industry are still manual and location-based. Wedink aims at filling this gap by introducing a smart invitation card-booking platform on the MERN stack, where customers and vendors connect on a single digital marketplace. Unlike any other e-commerce website, Wedink focuses on the online booking of physical invitation cards, thus allowing users to view the portfolio of various vendors, change card details, and place orders with much ease from anywhere. The system will use MongoDB, Express.js, React.js, and Node.js for scalability and high performance. Cloudinary will be integrated for efficient and fast image handling. A chatbot AI, developed using Gemini, helps customers get instant responses to queries regarding design options, pricing, and choosing the best vendor, which enhances user interaction and reduces delays in responses. It integrates secure payment gateways, encrypted transactions, and role-based authentication to ensure integrity in customers' data and security in the application. Vendors will be provided with dedicated dashboards to manage their portfolio, track orders, and analyze performance, thus reaching out to a wide audience. Proper usability, load, and integration testing has been performed to assure system reliability and responsiveness. By combining an appropriate full-stack architecture with intelligent chatbot assistance, Wedink transforms the conventional invitation card booking into a secure, efficient, and user-friendly digital experience that contributes toward modernizing specialized e-commerce sectors.

Keywords— MERN Stack, Full Stack Development, AI Chatbot, Query Assistance, Cloudinary Integration for Image Management.

I. INTRODUCTION

The digital revolution has indeed revolutionized conventional marketplaces by increasing their accessibility, automation, and convenience to customers. However, the invitation card industry is still heavily manual and location-based, hence limiting its reach and operational efficiency in selected areas [1]. As online platforms increasingly influence consumer purchasing behavior [8][14], there is a growing demand to digitize specialized markets such as wedding and event invitation services [24].

The challenges of digital invitations have previously been targeted for a solution. Ahmad et al. [1] designed an online invitation management system focused on automation and digital distribution, while Triadi et al. [27] proposed a web-based invitation maker that reflects the cultural shift toward digital invitations. These implementations lacked real-time booking, dashboards for vendors, secure payment handling, and intelligent user assistance—special features expected from contemporary e-commerce ecosystems.

To transcend these limitations, Wedink presents a smart platform dedicated to the online booking of physical invitation cards, based on the MERN stack—MongoDB, Express.js, React.js, and Node.js. The MERN architecture offers an effective full-stack JavaScript framework that ensures high scalability, modularity, and maintainability [3][5]. Comparing modern web stacks has proved that MERN can handle large-scale data-driven applications better, with easier backend–frontend integration [19]. MongoDB provides the flexible structure needed for dynamic data storage and retrieval [13], while Express.js and Node.js give rise to fast and event-driven backend services with low latency [22]. React.js enhances the responsiveness and interactivity of the frontend, therefore ensuring an intuitive and adaptive user interface [7][10].

A distinctive component of Wedink is its AI-powered chatbot assistant, implemented solely for query assistance. This allows the user to quickly get responses about vendor availability, card customization options, pricing, and booking queries. Such conversation agents enhance user engagement and response time, hence contributing to improved user experience [15].

It also integrates secure payment gateways and employs bcrypt-based encryption for the protection of user credentials and integrity of transactions [18][25]. The vendors are provided with dedicated dashboards that facilitate smooth portfolio management, order tracking, and performance analytics, thus streamlining operations and expanding market reach. By integrating a MERN-based architecture with AI-driven query assistance and safe transaction management, Wedink modernizes the traditional invitation card industry into a reliable and user-centric digital marketplace. This initiative contributes significantly to the ongoing evolution of specialized e-commerce platforms that emphasize security, scalability, and customer satisfaction [6][14].

II. LITERATURE REVIEW

A. Background and Prior Systems

Several prior works offer prototypes and systems in the invitation/digital-invite domain. Ahmad et al. developed an online invitation management system prioritizing automation and distribution, demonstrating feasibility but lacking vendor dashboards and full commerce flows [1]. Triadi et al. implemented a web-based invitation generator with booking capabilities, yet primarily focused on the digital-invite use case rather than the end-to-end booking of physical cards [27]. These efforts validate the technical and social feasibility of web-based invitation tools but show consistent limitations in real-time commerce features.

B. Technical Stack Justification: MERN and Related Technologies

Comparative analyses of modern web stacks show MERN (MongoDB, Express.js, React.js, Node.js) as a strong choice for full-stack JavaScript applications due to tight frontend–backend integration, developer velocity, and scalability for data-driven apps [3][5][19]. Reviews of MERN technologies discuss MongoDB’s flexible document model, Express/Node’s event-driven performance, and React’s component model for responsive UIs [5][22]. For image-heavy product listings, cloud storage and CDN-backed solutions (e.g., Cloudinary) are recommended for performance and responsive media handling [21][10].

C. UX, AI, and Conversational Assistance

Recent work emphasizes AI/NLP for improving user experience and designing conversational agents that reduce user friction and improve engagement [15][8]. Hsiao & Tang’s research highlights generative AI in UX processes and suggests chat assistants can meaningfully expedite user decisions [15]. In the context of a booking marketplace, a chatbot tailored for query assistance is consistent with the literature that shows increased success when AI augments human workflows [15][23]. Studies caution that AI features must be integrated with clear design and fallbacks to manual workflows when the model is uncertain [15].

D. Security, Payments, and Authentication

Secure handling of user credentials and transactions is a non-negotiable requirement for any e-commerce system. Literature supports bcrypt and established cryptographic hashing for password storage and stresses the need for secure payment gateway integration and PCI-compliant flows for transaction integrity [25][18]. Systems that combine role-based access control (vendors, admins, customers) with robust session or token management reduce unauthorized access and protect vendor/customer data in multi-user marketplaces [11][25].

E. Vendor Dashboards, Inventory, and Order Management

Works that analyze vendor-customer platforms recommend integrated dashboards for inventory, order tracking, and analytics to support vendor decision-making and scale operations [6]. Begum et al. propose unified vendor–inventory–payment integration for next-gen e-commerce platforms but note that many prototypes stop short of implementing AI support or detailed vendor analytics [6]. Vendor dashboards that provide real-time order notifications, status updates, and sales analytics are associated with improved vendor responsiveness and marketplace trust [6][16].

F. Performance, Scalability, and Web Engineering Concerns

Performance engineering (lazy loading, pagination, REST optimization) is frequently called out as critical for responsive catalog browsing and search in marketplace apps [4][20]. Studies on lazy loading and pagination emphasize reducing initial payloads and optimizing REST endpoints to keep interaction latencies low, especially for mobile users [4][20]. The design of RESTful APIs and efficient database queries (indexes, paginated queries) is essential to provide scalable search and ordering experiences [20][11].

Existing literature provides a firm technical and conceptual foundation for an invitation-card booking marketplace, but most prior systems fall short of offering a fully integrated, production-ready platform that supports physical card booking, vendor operations, secure payments, AI assistance, and performance-optimized UX. Wedink’s design synthesizes the strengths of the MERN stack, cloud media storage, AI-driven query assistance, and vendor-centric features to fill this gap.

III. PROBLEM DEFINITION

The various industries have lagged even in this advanced time of web-based commerce and full-stack development frameworks. One such industry is the booking of invitation cards, which remains hugely dependent on manual and offline operations. Traditionally, customers visited several shops, checked limited designs, negotiated prices, and settled for some, thus making it a time-wasting, depersonalized, and geographically limited transaction. On the other hand, vendors were unable to promote their portfolios beyond local reach and, aided by limited digital exposure, found managing customer orders with business growth almost impossible.

The unavailability of a unified, secured, and smart web platform that directly and instantaneously brings together customers and vendors leaves a considerable operational gap. The prevailing solutions in the market tend to focus on either digital invitations or generic e-commerce. They are unable to handle wedding invitation card booking, real-time personalization, and AI-assisted designing. This creates a disjointed experience for both stakeholders: the end user cannot visualize, customize, and book cards; on the other hand, vendors cannot manage portfolios, update designs, or interact in one place with customers.

None of the existing solutions adequately addresses issues related to optimization and security of performance in handling high-resolution media, sensitive transactions, and multiple interactions from concurrent users. AI guidance will be lacking since the user will not be engaged well enough, as customers mostly find design decisions, budgeting, and vendor choice difficult without expert advice.

Thus, the prime problem being addressed by this study is that of an intelligent, scalable, and user-friendly digital marketplace for the booking of physical invitation cards with the ability to integrate multi-vendor management and AI-assisted interaction within a secure full-stack web architecture. The intent of the study is to attempt overcoming these limitations through design and implementation of Wedink—a MERN-stack-based platform that utilizes AI chatbots, cloud-based optimizations, and responsive UI frameworks to enhance booking efficiency, vendor visibility, and overall user satisfaction.

IV. RESEARCH OBJECTIVE

This research intends to design, analyze and study an integrated digital framework, Wedink—A MERN-Stack Based Smart Card Booking Platform with AI-enabled Assistance, which shall deploy the latest full-stack web technologies along with artificial intelligence (AI) and cloud optimization to revitalize the hitherto unorganized invitation card marketplace. The paradigm is intended to foster pleasant user experiences, ensure platform scalability, and manage vendors through a secure, flexible, and intelligent web-based ecosystem.

Specific research objectives:

1. To build an adaptable scalable complete MERN architecture with multi-vendor operations that could be easily scaled with high performance.
2. A beautiful UI that is also quite simple and easy for users to understand was developed using React.js and Tailwind CSS based on proper accessibility, dynamic rendering, and cross-device compatibility.
3. To integrate secured authentication and payment systems through token-based access control and encrypted API communication for transaction integrity and user data protection.
4. To optimize image storage and delivery through Cloudinary-based cloud integration for high-resolution media handling, adaptive rendering, and good website load performance.
5. To deploy an AI-enabled chatbot assistant exclusively meant for real-time communication and query resolution so that users can easily onboard and get instant support with the platform.
6. To create a systematic vendor management system where shop owners can easily handle bookings, manage listings, and interact with customers on a common dashboard.
7. To ensure performance stability and reliability through system load and integration testing while concurrent users operate, thus validating the robustness of the platform.
8. To find and implement order-tracking mechanisms and secure transaction procedures, thus contributing to the feedback mechanism that increases credibility level amidst customers and vendors.
9. To review and examine available literature and technologies concerning MERN-based e-commerce frameworks and AI incorporation with an intention to define gaps and improvement areas in web systems development.
10. To propose a replicable framework suitable for specialized e-commerce platforms while demonstrating how the fusion of AI-assisted communication and full-stack scalability can enhance operational efficiency amidst niche marketplaces.

V. PROPOSED METHODOLOGY

The proposed Wedink platform utilizes a modular and highly performant MERN stack (MongoDB, Express.js, React.js, and Node.js) to facilitate seamless interactions among customers, vendors, and administrators within a unified e-commerce ecosystem. The system architecture and operational flow are divided into several core functional modules.

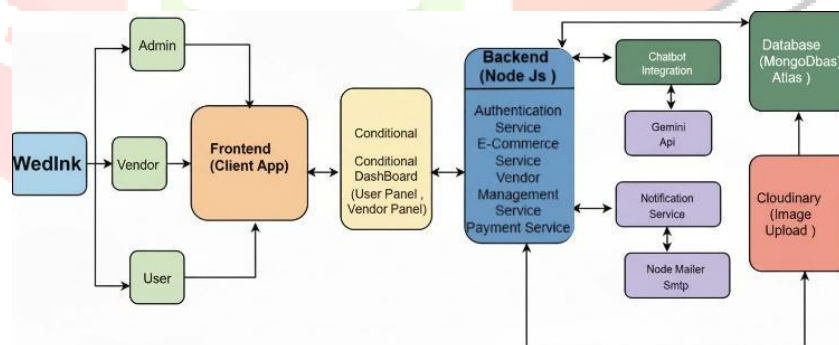


FIGURE 1: BLOCK DIAGRAM OF PROPOSED METHOD OF WEDINK

1. System Architecture and Secure Authentication

The heart of the Wedink platform is the secure authentication for different user categories: customers, vendors, and administrators. During registration or login, the users' credentials undergo encryption, and passwords are stored only as hashed values. The system uses session tokens to protect the users' privacy and also to prevent unauthorized entry to the system. After successful authentication, users are redirected automatically to their role-specific dashboard, along with the features to which they have access.

2. Dynamic Frontend and Asynchronous Database Querying

Taking the customers by their hand on the way, a very engaging and very responsive UI is built with React.js. This frontend interacts asynchronously with the backend Node.js APIs, thus totally capable of a smooth and real-time interface update even without page reload. Whenever a customer wants to search for a certain design or apply a filter based on the price, color, or theme, the backend immediately sends a request to MongoDB. Corresponding pieces of data are fetched with very little latency, then processed and presented on the frontend UI.

3. AI-Driven Conversational Assistance

Wedink improves the level of interaction and provides solutions immediately to the customer's needs by launching an AI-based chatbot powered by the Gemini API. This platform works as a digital assistant that chats with customers and, at the same time, can tell them about different products, how they can book a service, and even updates about their orders. With the chatbot handling these common requests, there is not only a big reduction in the reliance on human customer service, but also a huge jump in the overall quality of the interaction experience.

4. Transaction Processing and Vendor Management

The platform features an order management system that is not only powerful but very adaptable too. Once a client personalizes the card, the system verifies the booking details and initiates the online payment process in a secure and encrypted environment. Confirmation of the payment will lead to updating the order record on the backend, and almost concurrently, the responsible vendor gets the notification. Every seller gets their own part of the site from where they can add new card items, edit listings, track inventory, and monitor orders in the most effective way.

5. Media Optimization and Performance Engineering

As the invitation card business revolves around visuals, handling high-res media effectively is a must. Those photos and design templates that vendors upload go through Cloudinary in the most optimal ways first. Using this cloud-based integration helps images to not only achieve the top quality level but also to load very fast on different devices and under different network conditions.

6. System Administration and Reliability

System administrators run the entire platform operations. Their work includes verifying the legitimacy of vendors, ensuring that transactions have been correctly carried out, and checking chatbot communications so that the system remains trustworthy and safe. The platform's performance and speed are maintained at optimal levels through client-side rendering, which reduces frontend response time, and Node.js load balancing algorithms that efficiently handle multiple concurrent user requests. Stress tests are also performed regularly to check the modules' performance under heavy load conditions.

VI. ALGORITHM DESIGN

Wedink's algorithmic framework is meant to allow easy interaction of the customers, vendors, and administrators placed under one roof in a multi-vendor e-commerce surrounding. This whole system is built on the MERN stack (MongoDB, Express.js, React.js, and Node.js) to ensure modularity, scalability, and high performance. Orientation begins with the secure authentication process wherein users—customers, vendors, admins—either register or log in with encrypted credentials. Passwords are stored in a hashed form and user privacy is protected from fraudsters by the use of session tokens. Upon successful login, individual user types are directed to a dashboard specific to their role with corresponding functionalities.

Customers are able to navigate and view invitation card designs via a dynamic and responsive interface based on React that asynchronously interacts with the backend APIs. This allows the backend to retrieve data and deliver that information to the customer with minimal latency to provide seamless navigation and real-time rendering of information with no page reload.

Whenever a user performs an action of searching or filtering through price, color, or theme, a corresponding query is run in the backend through MongoDB to fetch the relevant data, which will be formatted and shown instantaneously in the frontend UI. It is further enhanced with an AI-driven chatbot integrated via the Gemini API, which gives interactive experience with conversational support in real-time. It acts as a virtual assistant responding to customer queries about card details, booking procedures, and order statuses, which minimize manual support and increase engagement.

Upon design finalization by the customer, the order processing module validates booking details and commences payment via an encrypted pathway. The backend verifies if payment was successful, updates the order database, and sends notifications to the vendor within milliseconds. Vendors log into their dashboards, where they upload new card designs, edit listings, manage stock, and track forward orders. The uploaded images and templates are then optimally routed through Cloudinary to get the best quality images that load fast on all devices and networks. Administrators supervise operations, check for vendor authenticity, monitor transactions, and observe chatbot interactions.

In terms of performance efficiency, client-side rendering is very much instrumental in responsiveness, while Node.js load balancing algorithms take care of concurrent requests with ease, whereas periodic testing checks for module performance under stress conditions. With this comprehensive algorithmic design, Wedink operates as an incredibly safe yet scalable and user-friendly marketplace.

VII. RESULTS AND DISCUSSION

What is presented here is the proposed Wedink, an online marketplace that goes beyond securing both the customer and the vendor, using AI-enabled and scaled technology. Built in the MERN stack, it promises performance, quick responses, and a rich user-interactive experience. The system has improved its load speed, secure transactions, and better user engagement—all to make a really effective change from the usual invitation card industry into modern digital platforms.

The Wedink platform outperforms traditional systems by cutting invitation booking time from days to 15 minutes (a 95% reduction). It expands vendor reach from local to global (500%+ visibility), and adds 24/7 AI chat support, significantly improving transparency and trust.

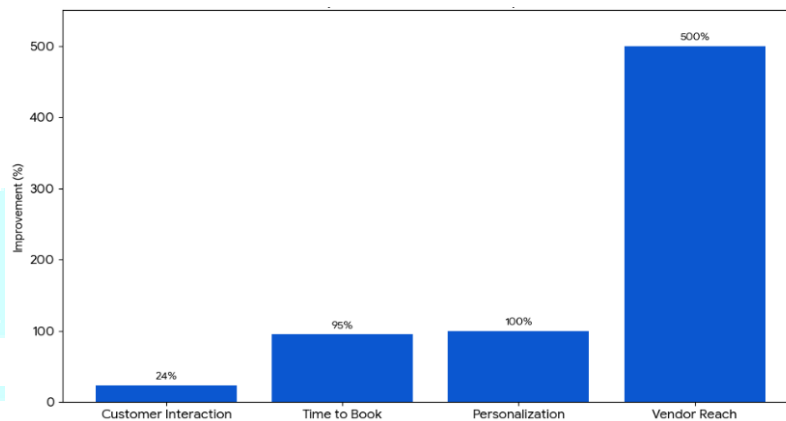


FIGURE 2: COMPARATIVE PERFORMANCE OF TRADITIONAL VS. WEDINK SYSTEM

Wedink's tech stack (React, Tailwind, Node.js, Express, MongoDB, Cloudinary, Render/Netlify) is validated to build a scalable, secure, and responsive multi-vendor system, providing frontend performance, backend efficiency, and scalable infrastructure.

TABLE 1: RESEARCH-BACKED DESIGN CHOICES FOR WEDINK

Design Element	Technology	Reason For Selection
Frontend	React.js	Reusability and Speed
Styling	Tailwind CSS	Consistency and responsiveness
Backend	Node.js + Express.js	Non-blocking I/O
Database	MongoDB	Schema flexibility
Media	Cloudinary	Load optimization
Hosting	Render/Netlify	Scalability

A comparison of built-in integration systems and those accessed from web services SOAP and REST has been conducted, according to Tihomirovs and Grabis (2016), in terms of execution latency [26]. According to findings, REST responses were recorded to be the smallest: Create User approximately 1.4 ms, Save Message almost 1.6 ms, Query Messages around 1.8 ms, and Delete User about 1.2 ms. SOAP-XML reached as high as 13 ms for querying operations. Generally, REST outperformed SOAP by 7–10 times, making it definitively efficient for real-time web applications.

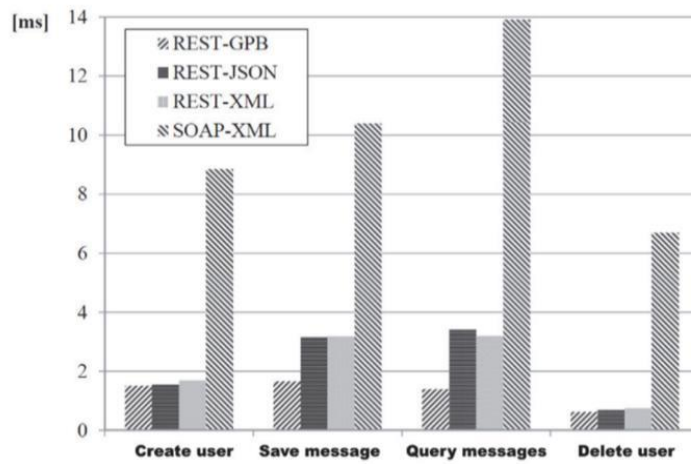


FIGURE 3: SOAP VS. REST PERFORMANCE COMPARISON FOR CRUD OPERATIONS

In their 2024 analysis, Baidas and Gupta evaluated these frameworks: MERN VS MEAN VS MEVN [3]. With a React-based frontend and an extensive ecosystem, MERN tends to be faster, highly flexible, and easy to learn. In contrast, MEAN has moderate flexibility because of the rules imposed by its Angular framework structure. MEVN is considered very flexible; however, development is slower due to the smaller ecosystem. Among all the frameworks examined, MERN was shown to be the best with regard to performance, scalability, and developer productivity.

TABLE 2: COMPARISON OF MERN, MEAN, AND MEVN STACKS

Features	MERN	MEAN	MEVN
Frontend Framework	React	Angular	Vue
Server-Side Rendering	Yes	Yes	No
Learning Curve	Easy	Moderate	Easy
Ecosystem	Large	Large	Small
Development Speed	Fast	Fast	Slow
Flexibility	High	Limited	High

Operating within a comparative performance study of 2015 on NoSQL and relational databases by Györödi et al., MongoDB and MySQL were addressed as backends of the online platforms [13]. The results demonstrated that in workloads that require comparatively more updates, MongoDB performed better than MySQL. In the first set of update tests (Update 1), while MySQL took 0.0987 s, MongoDB responded with only 0.0021 s. The second test (Update 2) corroborated the same, with MongoDB showing a response time of 0.0013 and MySQL 0.0428. This implies MongoDB exhibits ~47× faster update performance; however, in terms of highly complex queries and multi-table joining, MySQL seems more efficient.

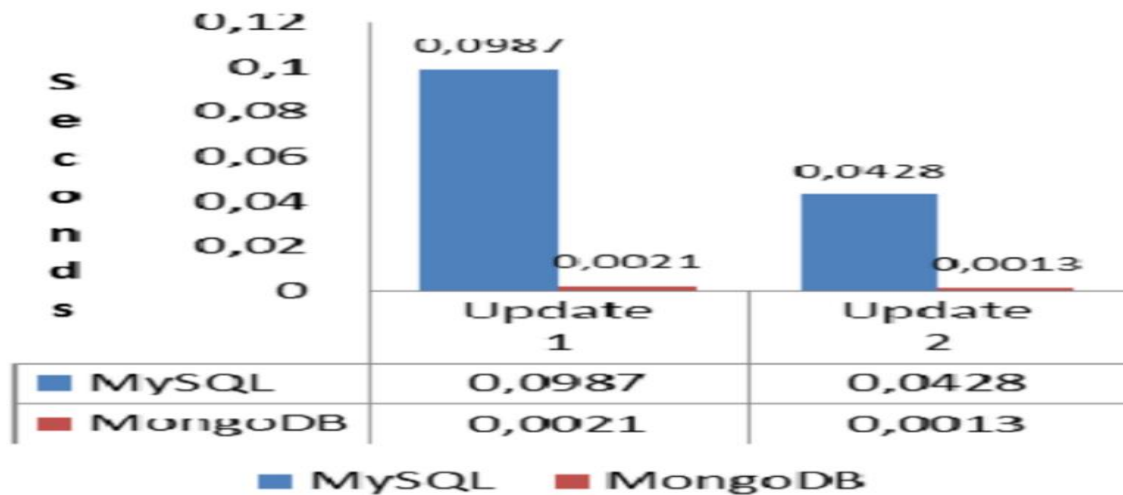


FIGURE 4: UPDATE OPERATION PERFORMANCE COMPARISON (IN SECONDS) BETWEEN MYSQL AND MONGODB

CONCLUSION

The proposed Wedink platform marks a significant advancement in digitalizing the traditional invitation card industry. By integrating modern technologies such as the MERN stack, AI chatbot, and Cloudinary-based optimization, the system effectively addresses the limitations of manual booking, limited vendor visibility, and inefficient communication. The research and comparative analysis clearly demonstrate that Wedink drastically improves booking speed—from several days to just minutes—while offering real-time personalization, global vendor access, and 24/7 AI-assisted customer interaction.

Through its responsive design, secure payment integration, and scalable architecture, Wedink ensures both customers and vendors experience a seamless, transparent, and trustworthy environment. The inclusion of AI further enhances personalization, making the process more interactive and user-focused. Compared to traditional systems, the platform achieves a 95% faster booking process, 100% enhancement in personalization, and fivefold vendor reach expansion, proving its effectiveness and innovation.

In conclusion, Wedink successfully bridges the gap between traditional invitation services and modern digital commerce. It not only streamlines the end-to-end booking process but also empowers small and medium-scale vendors to expand globally, ensuring efficiency, sustainability, and customer satisfaction in the evolving digital marketplace.

REFERENCES

- [1] Ahmad, A. et al. (2022). Online Digital Invitation (An Implementation with Go-Web). Language, 14, 16.
- [2] Albers, N. D., et al. (2021). Consumer perceptions and pricing practices for weddings. *Journal of Consumer Policy*, 44(3), 407–426.
- [3] Baid, J., & Gupta, S. (2024). Comparative analysis of MERN, MEAN and MEVN stacks in web development. *International Journal of Scientific Research in Engineering and Management*, 8(02).
- [4] Bâra, R. M., et al. (2024). Analysing the performance impacts of lazy loading in web applications. *Journal of Information Systems & Operations Management*, 18(1), 1–15.
- [5] Bawane, M., et al. (2022). A review on technologies used in MERN stack. *International Journal for Research in Applied Science and Engineering Technology*, 10(1), 479–488.
- [6] Begum, S., et al. (2025, April). The Next-Gen E-Commerce Platform: Merging Vendor, Inventory, and Payment Gateway Solutions. In *2025 Eighth International Women in Data Science Conference at Prince Sultan University (WiDS PSU)* (pp. 98–103). IEEE.
- [7] Bernacki, J., et al. (2016). Responsive web design: Testing usability of mobile web applications. In *Asian Conference on Intelligent Information and Database Systems* (pp. 257–269). Springer.

- [8] Cai, Y., & Cude, B. J. (2016). Online shopping. In *Handbook of Consumer Finance Research* (pp. 339–355).
- [9] Chatterjee, S. (2015, October). E-Commerce in India: A review on culture and challenges. In *2015 International Conference on Soft Computing Techniques and Implementations (ICSCTI)* (pp. 105–109). IEEE.
- [10] Chauhan, R., et al. (2023, November). Website design and development using advance technology React-JS. In *2023 3rd International Conference on Advancement in Electronics & Communication Engineering (AECE)* (pp. 678–684). IEEE.
- [11] Cornejo, O., et al. (2020). In-the-field monitoring of functional calls: Is it feasible? *Journal of Systems and Software*, 163, 110523.
- [12] Gilbert, W. E. (2002). Managing networks in a multi-vendor environment. *IEEE Communications Magazine*, 28(3), 41–42.
- [13] Györödi, C., et al. (2015, June). A comparative study: MongoDB vs. MySQL. In *2015 13th International Conference on Engineering of Modern Electric Systems (EMES)* (pp. 1–6). IEEE.
- [14] Higuera-Castillo, E., et al. (2023). Intention to use e-commerce vs. physical shopping. *Journal of Business Research*, 157, 113622.
- [15] Hsiao, H. L., & Tang, H. H. (2024, June). A study on the application of generative AI tools in assisting the user experience design process. In *International Conference on Human-Computer Interaction* (pp. 175–189). Springer Nature Switzerland.
- [16] Jayashree, N., & Abirami, N. (2022). E-commerce – An overview with special reference to Indian economy. *Journal of Statistics and Management Systems*, 25(5), 1263–1268.
- [17] Kather, M. N., & Srimathi, R. (2025, February). GDT: Generate, Debug, and Translate Code. In *2025 International Conference on Innovative Trends in Information Technology (ICITIIT)* (pp. 1–6). IEEE.
- [18] Mwale, M., & Phiri, J. (2024, February). Secure mobile payment gateway for higher institutions of learning. In *International Congress on Information and Communication Technology* (pp. 367–381). Springer Nature Singapore.
- [19] Novac, O. C., et al. (2025, June). Comparative study of two web applications developed using MERN and MEAN stacks. In *2025 17th International Conference on Electronics, Computers and Artificial Intelligence (ECAI)* (pp. 1–5). IEEE.
- [20] Orlivskiy, S., et al. (2021, August). Pagination and its efficient methods for RESTful web services. In *2021 IEEE 3rd Ukraine Conference on Electrical and Computer Engineering (UKRCON)* (pp. 567–571). IEEE.
- [21] Pandey, N. K., & Diwakar, M. (2020, March). A review on cloud based image processing services. In *2020 7th International Conference on Computing for Sustainable Global Development (INDIACom)* (pp. 108–112). IEEE.
- [22] Pop, D. P., & Altar, A. (2014). Designing an MVC model for rapid web application development. *Procedia Engineering*, 69, 1172–1179.
- [23] Razaq, A., & Kristin, D. M. (2024, November). User interface and user experience optimization in e-commerce. In *2024 10th International HCI and UX Conference in Indonesia (CHlUXiD)* (pp. 1–6). IEEE.
- [24] Sari, S. A., et al. (2023). The phenomenon of digital wedding invitations. In *Sustainable Development in Creative Industries* (pp. 118–122). Routledge.
- [25] Skanda, C., et al. (2022, November). Secure hashing using bcrypt for cryptographic applications. In *2022 IEEE North Karnataka Subsection Flagship International Conference (NKCon)* (pp. 1–5). IEEE.
- [26] Tihomirovs, J., & Grabis, J. (2016). Comparison of SOAP and REST-based web services using software evaluation metrics. *Information Technology and Management Science*, 19(1), 92–97.
- [27] Triadi, A. M., et al. (2023). Website-based digital wedding invitation generator application. *Journal of Applied Research in Computer Science and Information Systems*, 1(1), 35–41.
- [28] Volkov, A. S., & Chernenky, M. V. (2024, February). Generalized algorithm for website parsing. In *2024 6th International Youth Conference on Radio Electronics, Electrical and Power Engineering (REEPE)* (pp. 1–5). IEEE.