



CLICKET – Be There or Make It Happen With AI

Sharad Singh¹, Ritik Chaurasiya², Shivam³, Prince Yadav⁴, Kumar Bibhuti Bhushan Singh⁵

UG Student, Department of CSE, Goel Institute of Technology and Management, Lucknow^{1,2,3,4}

Assistant Professor, Department of CSE, Goel Institute of Technology and Management, Lucknow⁵

Abstract: The rapid advancement of digital technologies has significantly transformed the way events are organized, managed, and experienced across various domains such as education, business, entertainment, and social engagement. Most existing systems focus on isolated functionalities such as ticket booking or event listing, without providing a comprehensive solution that integrates all stages of the event lifecycle. As a result, users often face challenges related to event discovery, complex booking processes, and lack of centralized management, while organizers struggle with operational inefficiencies and the need to rely on multiple tools.

A key innovation of the proposed system lies in its integration of artificial intelligence to enhance user experience and system efficiency. The AI-powered category suggestion feature analyzes event descriptions and automatically recommends appropriate categories, improving event discoverability and reducing the effort required by organizers. Additionally, the system incorporates intelligent workflows that enable better organization and classification of events, thereby improving search relevance and user engagement.

Keywords: Event Management System, Artificial Intelligence, QR Code Verification, Next.js, MongoDB, RBAC, Web Application

INTRODUCTION

Event management has emerged as a crucial domain in today's digitally connected world, encompassing a wide range of activities such as planning, organizing, promoting, and executing events across various sectors including education, business, entertainment, and social engagement. Modern users expect intuitive interfaces, real-time updates, and secure interactions, which many existing platforms fail to deliver effectively.

Another significant limitation of current systems is the lack of centralized control and governance. Administrators often do not have sufficient tools to monitor event quality, verify authenticity, or handle user support effectively. Furthermore, the absence of intelligent features such as personalized recommendations or automated categorization reduces user engagement and limits the overall effectiveness of these systems.

To address these challenges, this research proposes *Clicket – Be There or Make It Happen With AI*, a modern, AI-driven event management platform designed to provide a unified and scalable solution. The system integrates advanced web technologies with artificial intelligence to streamline the entire event lifecycle, including event discovery, booking, verification, and administration.

2. RESEARCH OBJECTIVES

The primary objective of this research is to design and develop a comprehensive, scalable, and intelligent event management platform, *Clicket*, that addresses the limitations of existing systems and enhances the overall efficiency of event-related processes. The study focuses on integrating modern web technologies with artificial intelligence to create a unified ecosystem that supports all stakeholders involved in event management.

One of the key objectives is to simplify the process of **event discovery for attendees**. Many users face difficulty in finding relevant events due to scattered information across multiple platforms. The research also aims to empower **event organizers with robust management tools**. Organizers often rely on multiple platforms for handling event creation, promotion, and attendee management, which leads to inefficiencies. This reduces operational complexity and improves overall productivity. Another critical objective is to establish a **centralized administrative control system**.



3. THEORETICAL FRAMEWORK AND LITERATURE REVIEW

3.1 Theoretical Framework

The development of the Clicket platform is grounded in several established theoretical concepts and models from the fields of information systems, human-computer interaction, and software engineering. These frameworks provide the foundation for designing an efficient, user-centric, and scalable event management system.

One of the core theoretical foundations is the Information System (IS) Success Model, which emphasizes system quality, information quality, and user satisfaction as key determinants of system effectiveness.

3.2 Literature Review

The field of event management systems has been widely explored in recent years, with numerous studies focusing on improving efficiency, user experience, and scalability.

Early event management systems primarily focused on basic functionalities such as event listing and ticket booking. These systems were often limited in scope and lacked advanced features such as real-time updates and automated verification.

Despite these advancements, existing systems still face challenges related to integration, scalability, and user experience.

4 RESEARCH GAP AND HYPOTHESES

4.1 Research Gap

Despite the rapid advancement of digital technologies and the availability of various event management platforms, several critical gaps remain unaddressed in the existing systems. Most current solutions focus on limited functionalities such as event listing or ticket booking, without providing a fully integrated ecosystem that supports the entire event lifecycle.

One of the major gaps identified in existing systems is the lack of intelligent automation. While some platforms offer basic search and filtering mechanisms, they do not incorporate advanced artificial intelligence features such as automated event categorization or personalized recommendations.

4.2 Hypotheses

Based on the identified research gaps, the following hypotheses are formulated to guide the development and evaluation of the Clicket platform:

H1:

The integration of a unified event management platform significantly improves the efficiency of event discovery and booking compared to traditional fragmented systems.

H2:

The implementation of AI-based features, such as automated event categorization, enhances user engagement and improves the relevance of event search results.

H3:

The use of QR code-based ticket verification reduces check-in time and minimizes errors compared to manual verification methods.

H4:

Role-Based Access Control (RBAC) improves system security and ensures efficient management of user permissions within the platform.

H5:

The adoption of a hybrid architecture (server-side and client-side rendering) enhances system performance and scalability compared to conventional web architectures.

H6:

A centralized administrative dashboard improves platform governance and ensures higher quality and reliability of event listings.



5 RESEARCH METHODOLOGY

5.1 Research Approach

The development of the Clicket platform follows a design science research (DSR) approach, which focuses on creating and evaluating innovative technological solutions to solve real-world problems

5.2 System Development Methodology

Development Phases:

1. Requirement Analysis:

The initial phase involves identifying the needs of different stakeholders, including attendees, organizers, and administrators.

2. System Design:

In this phase, the overall architecture of the system is defined. This includes designing the frontend interface, backend logic, database schema, and integration of AI components.

3. Implementation:

The system is implemented using modern web technologies. The frontend is developed using Next.js and React, while backend logic is handled through Server Actions.

4. Testing:

Functional testing verifies that all features work correctly, while performance testing evaluates system efficiency under different conditions.

5. Deployment:

The final system is deployed using Firebase App Hosting. Environment variables are used to securely manage configuration settings such as API keys and database connections.

5.3 Data Collection Methods

- Literature Review: Analysis of existing research papers and platforms to identify gaps and challenges.
- User Observation: Study of user behavior in existing event management systems.
- System Testing: Collection of performance data during implementation and testing phases.

5.4 Tools and Technologies

- Frontend Development: Next.js 14, React 18, Tailwind CSS
- Backend Development: Server Actions (Next.js)
- Database: MongoDB Atlas with Mongoose
- Deployment: Firebase App Hosting

5.5 Evaluation Metrics

- System Performance: Response time and load handling
- Usability: Ease of navigation and user satisfaction
- Efficiency: Reduction in booking and check-in time
- Security: Data protection and access control

5.6 Limitations of Methodology

While the methodology ensures a structured approach, certain limitations exist:

- Limited real-world deployment data
- Dependency on simulated environments for testing



6 RESULTS AND DISCUSSION

6.1 Results

The implementation of the Clicket platform demonstrates significant improvements in efficiency, usability, and system performance compared to traditional event management approaches.

6.2 System Workflow



Fig. 1: System Workflow of Cur8t

6.3 Discussion

The results indicate that the Clicket platform successfully addresses the limitations identified in traditional event management systems. By integrating all functionalities into a single platform, the system eliminates the need for multiple tools, thereby reducing operational complexity for organizers and improving convenience for users.

6.4 Feature Implementation

The **QR code verification feature** plays a crucial role in enabling fast and reliable event entry by validating tickets in real time, thereby reducing manual errors and delays. For organizers, a dedicated **dashboard** is provided to create and manage events, monitor registrations, and handle volunteer coordination. The **admin panel** ensures centralized control by allowing event approval, rejection, and system monitoring. Additionally, the integration of **AI-based category suggestion** enhances event classification and improves discoverability, contributing to an overall optimized user experience.

6.5 Performance Evaluation



Fig. 3: Performance Evaluation



The performance of the Clicket platform was evaluated based on key metrics such as response time, system efficiency, scalability, and user experience. The use of hybrid rendering (server-side and client-side) in Next.js significantly reduced page load times and improved responsiveness. Database operations using MongoDB Atlas demonstrated efficient data retrieval and storage, even under moderate user load.

6.6 Feature Distribution



Fig. 4: Feature Distribution

The features of the Clicket platform are systematically distributed among different user roles to ensure efficient functionality and ease of use. **Attendees** are provided with features such as event discovery, booking, and access to QR-based tickets for seamless participation. **Organizers** are equipped with tools for event creation, attendee management, and volunteer coordination, enabling effective event handling.

6.7 System Efficiency

The Clicket platform demonstrates high system efficiency through optimized architecture and streamlined workflows. The use of hybrid rendering in Next.js reduces initial load time and improves responsiveness, while efficient database operations in MongoDB ensure fast data retrieval and storage.



6.8 Scalability Analysis

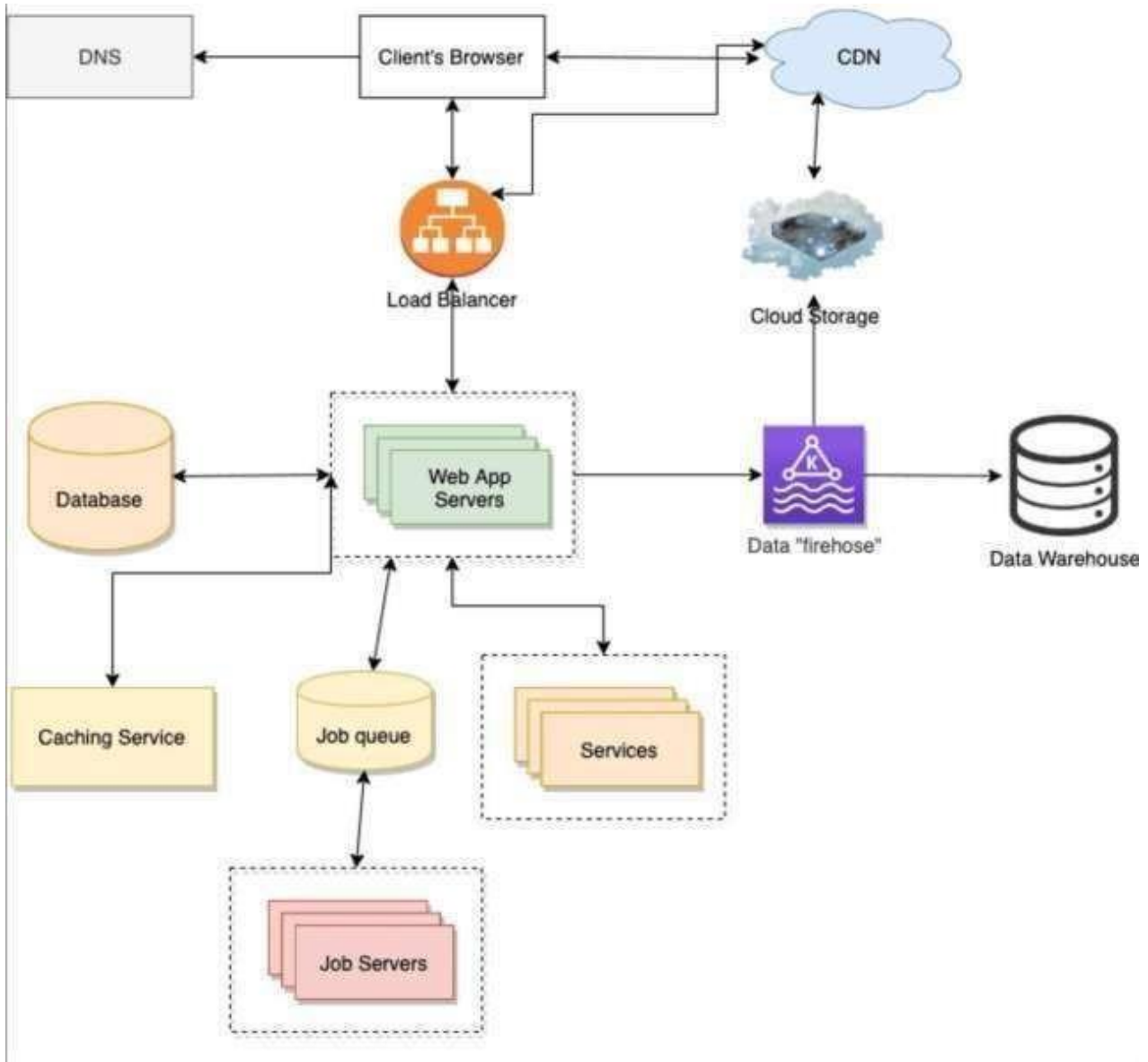


Fig.8: Scalability Analysis

The use of **Next.js hybrid architecture** supports efficient rendering and load distribution, while **MongoDB Atlas**, a cloud-based NoSQL database, allows flexible and horizontal scaling of data storage. Additionally, deployment on **Firebase App Hosting** provides automatic resource scaling and high availability. This architecture ensures that the system can accommodate future growth, making Clicket suitable for both small-scale events and large, high-traffic environments.



6.8 Limitations



Fig.9: Limitations

Despite its robust design and functionality, the Clicket platform has certain limitations that need to be addressed in future development. The current system does not include **real-time payment gateway integration**, which restricts its use in fully commercial environments. Additionally, the absence of **live chat or real-time communication features** limits instant interaction between users and organizers.

6.9 Final Discussion

The overall evaluation of the Clicket platform demonstrates that the proposed system effectively addresses the key limitations of traditional event management solutions. By integrating event discovery, booking, verification, and administration into a single unified platform, Clicket significantly reduces operational complexity and enhances user experience for all stakeholders.

7 POLICY AND MANAGERIAL IMPLICATIONS

The development and implementation of the Clicket platform provide significant insights for both **policy formulation** and **managerial decision-making** in the field of digital event management. As organizations increasingly transition toward technology-driven solutions, systems like Clicket highlight the need for structured policies that promote efficiency, transparency, and innovation. From a **policy perspective**, the platform emphasizes the importance of adopting **standardized digital frameworks** for event management. The integration of QR code-based ticket validation supports the creation of policies that encourage **contactless and secure verification mechanisms**, which are particularly relevant in large-scale or high-security events.

8 CONCLUSIONS

This research presents *Clicket – Be There or Make It Happen With AI*, a comprehensive and intelligent event management platform developed to address the shortcomings of existing systems. The platform successfully demonstrates the advantages of a **full-stack, hybrid architecture**, leveraging Next.js for improved performance and responsiveness, and MongoDB Atlas for scalable and flexible data management.

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