

Planify – The Event Hub: Intelligent Event Management Platform

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Abstract - Contemporary event management demands efficient communication, precise planning, and dynamic budget oversight. Conventional platforms frequently fall short in providing integrated real-time coordination, intelligent decision support, and cost forecasting capabilities. Planify – The Event Hub is proposed as a next-generation platform that leverages artificial intelligence and predictive analytics to transform the event management lifecycle. The system incorporates AI-driven communication modules, automated budget surveillance, and data-informed decision-making to overcome the limitations of traditional approaches. Furthermore, the platform streamlines organizer-stakeholder collaboration, minimizes manual workload through task automation, and delivers a scalable, flexible architecture suitable for diverse event categories while sustaining high operational efficiency and user satisfaction.

Key Words: Artificial Intelligence, Event Management System, Predictive Analytics, Budget Forecasting, Smart Scheduling, Automated Workflow, Ticketing Security.

I. INTRODUCTION

The growing complexity of modern event organization has placed immense pressure on planners to deliver faster, more accurate, and cost-effective outcomes. Traditional event management methods are increasingly inadequate, often resulting in communication breakdowns, scheduling inefficiencies, and budget overruns. While several digital platforms have emerged to address these gaps, they commonly lack the integration of real-time data processing and intelligent automation. The widespread adoption of digital transformation across industries has created a strong demand for smart, data-driven event platforms. Artificial intelligence offers the potential to enhance decision-making processes, while predictive analytics enables organizers to anticipate risks and allocate resources with greater precision [1]. Planify – The Event Hub addresses this need by offering a unified solution that integrates intelligent communication, automated workflows, and advanced budget forecasting within a single, scalable framework.

A. Common Challenges in Event Management

Modern event management faces several recurring obstacles: absence of effective communication channels among stakeholders, heavy dependence on error-prone manual processes, vulnerabilities in ticket management and event security, and persistent difficulties in achieving accurate budget control and financial oversight [2].

B. Motivation

The motivation for developing Planify arises from the growing demand for a comprehensive, all-in-one event management solution. The rapid proliferation of AI-based technologies presents an opportunity to build smarter platforms, while the increasing complexity of large-scale events reinforces the need for reliable predictive analysis tools that can assist organizers at every stage of the event lifecycle [3].

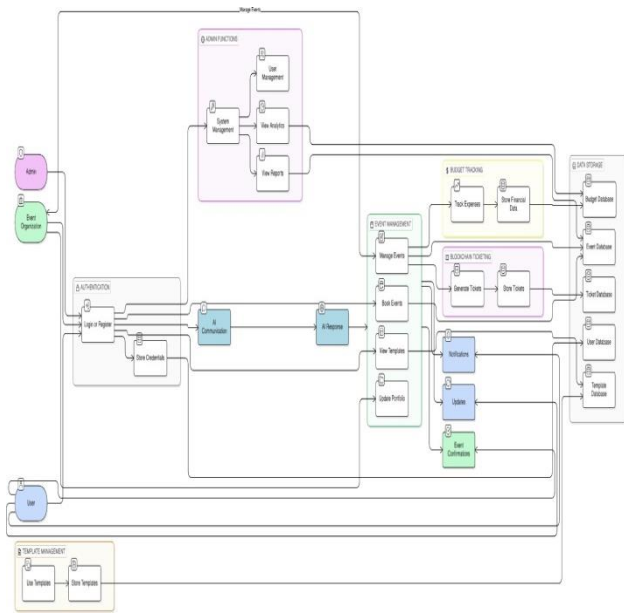
II. SIGNIFICANCE OF THE SYSTEM

This work demonstrates the transformative role of artificial intelligence and predictive analytics in building an advanced event management ecosystem. Planify: The Event Hub functions as a centralized platform that directly addresses the communication bottlenecks and operational inefficiencies inherent in conventional event planning methods. Its predictive analysis capabilities allow more accurate estimation and proactive management of event-related expenditures [4].

III. LITERATURE SURVEY

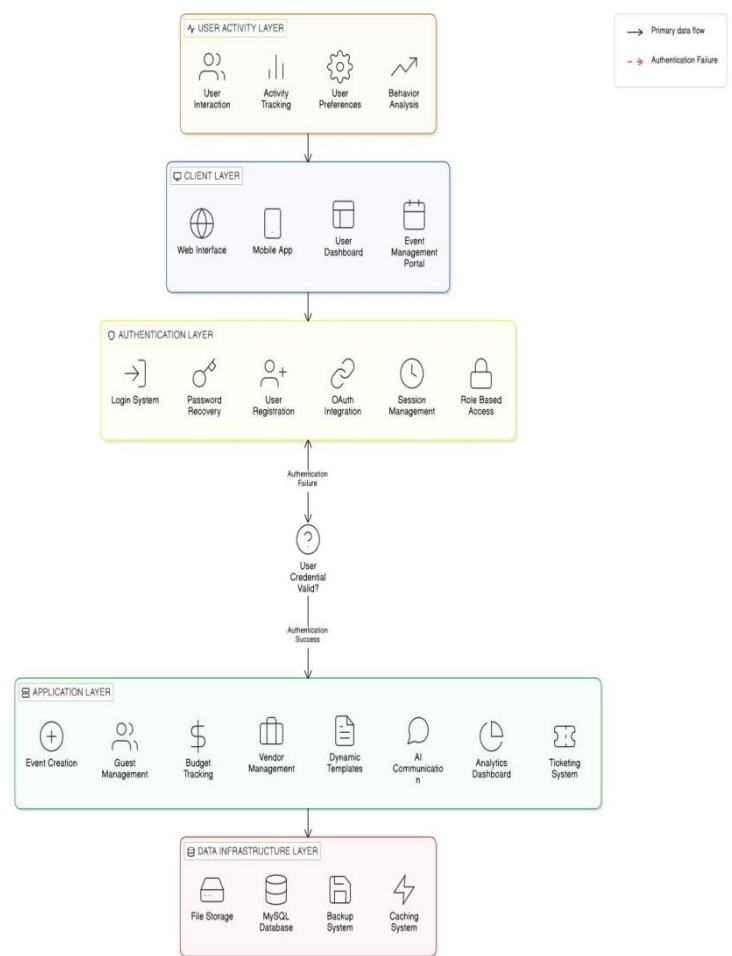
B. Technology Integration: Several platforms have begun incorporating modern technologies; however, the depth of implementation often remains superficial. Artificial intelligence is frequently confined to basic chatbot capabilities, with minimal contribution to strategic planning or intelligent operational support [6].

C. User Experience: A considerable portion of available solutions fail to deliver a seamless and consistent experience across events of varying scales and categories. Interface design often lacks the clarity and intuitiveness required for effective adoption by diverse user groups.



IV. METHODOLOGY

The proposed platform adopts a structured and scalable architecture integrating multiple technological components for efficient event management. The methodology centers on a set of interconnected modules collectively enhancing planning, execution, and real-time monitoring capabilities. The system is designed to improve coordination between organizers, vendors, and participants while reducing manual effort through automation and intelligent decision-making. Additionally, the platform ensures efficient resource allocation, secure communication, and accurate budget tracking to deliver a seamless and reliable event management experience.



A. System Architecture

The architecture encompasses six core modules: (1) an Event Management Module utilizing machine learning for smart scheduling and resource optimization; (2) a Service Selection Module that evaluates vendors based on specialization, pricing, and historical performance; (3) a Budget Management Module employing predictive analytics for proactive cost estimation and overspend alerts; (4) an AI Communication Module leveraging natural language processing for context-aware stakeholder interaction; (5) a Ticketing and Security Module generating encrypted tickets with integrated fraud detection; and (6) a Notification Module delivering targeted, timely alerts to all relevant parties [7].

B. Implementation Strategy: The platform's implementation is structured around two key components. The Dynamic Template System provides responsive interface support, version control features, and reusable design components to ensure consistency. The Automated Budget Tracking system delivers live expense monitoring, future cost forecasting, budget optimization recommendations, automatic financial report generation,

and configurable warning alerts to maintain fiscal discipline throughout the event lifecycle [8].

V. CONCLUSION AND FUTURE WORK

Planify - The Event Hub presents a contemporary approach to event management by consolidating artificial intelligence and predictive analytics within a unified platform. The proposed system enhances operational efficiency, reduces organizational complexity, and facilitates faster, more informed decision-making for event organizers at all levels. Its scalable design accommodates events of varying types and sizes, while its automation capabilities and improved coordination features provide practical solutions to longstanding challenges in traditional event management. Future development directions include enhanced AI capabilities for intricate event scenarios, refined predictive models for superior decision support, integration with emerging digital technologies, dedicated mobile application support, and cloud-based infrastructure for improved scalability and data management [9][10].

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