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Spotlight Hub - A Platform for Talent Discovery and Hiring

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Abstract: ***The Talent hub: India is home to a vast pool of talented individuals across diverse performing arts such as music, dance, magic, and other creative disciplines; however, many performers struggle to gain visibility and access consistent opportunities due to the absence of a structured digital platform. This project proposes a full-stack, single-page web application that bridges the gap between performers and customers seeking entertainment for events, functions, and personal engagements. The system follows a dual-login architecture, enabling performers to create detailed profiles, upload demo videos, manage availability, and handle bookings through a dedicated dashboard, while customers can discover performers using category-based browsing, location filters, and profile insights. The platform incorporates a rating and review system to build trust and improve performer discoverability through reputation-based ranking. A secure booking workflow allows customers to schedule events, submit requirements, and complete bookings efficiently, with real-time booking management for both parties. Built using React and TypeScript for the frontend and Supabase for authentication, database, and storage services, the platform ensures scalability, security, and seamless user experience. By improving discoverability and simplifying engagement, the system empowers performers to build sustainable careers while providing customers convenient access to a diverse and verified talent marketplace.***

Keywords: Dual User Interface, Performer–Customer Platform, Secure Booking Workflow, Admin Control System, User Authentication & Verification, Role-Based Access Control, Data Management, Media Storage.

I. INTRODUCTION

India possesses a rich and diverse ecosystem of talented performers across fields such as music, dance, magic, and other creative arts. Despite this abundance of talent, many performers face significant challenges in gaining visibility, connecting with potential customers, and securing consistent performance opportunities. Traditionally, performers rely on word-of-mouth promotion, social media exposure, or intermediaries, which often lack reliability, transparency, and structured booking mechanisms. Customers, on the other hand, struggle to find verified performers who meet their specific requirements in terms of location, budget, availability, and skill set. This fragmented approach results in missed opportunities for performers and inefficient event planning for customers.

To overcome these limitations, this project proposes a digital performer discovery and booking platform that enables seamless interaction between performers and customers through a unified web- based system. The application operates on a dual- user interface model, allowing performers to create detailed profiles, upload demo videos, manage bookings, and track schedules, while customers can explore performers using category-based discovery, location filters, and profile insights. A secure booking workflow facilitates direct engagement, scheduling, and confirmation of events, supported by authentication, data management, and administrative verification. Developed using modern web technologies such as React with TypeScript for the frontend and Supabase for backend services including authentication, database, and media storage, the system ensures scalability, security, and efficiency. By digitizing and centralizing the performer booking process, the platform enhances talent discoverability, promotes fair opportunities, and establishes a reliable marketplace that benefits both performers and customers.

II. LITERATURE SURVEY

The authors [1] propose a digital talent marketplace aimed at connecting independent artists with event organizers through an online platform. Their study highlights the importance of profile-based discovery and categorized talent listings to improve visibility for performers. While the system improves accessibility, it lacks a secure booking workflow and real-time availability tracking, limiting its effectiveness for large-scale event management. The authors [2] analyze an online event booking system that enables customers to schedule performers and services through a centralized portal. The research emphasizes automation in booking confirmation and scheduling, which reduces manual coordination. However, the system does not provide media-based talent verification, making it difficult for customers to assess performer quality before booking.

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According to [3], multi-sided platforms play a critical role in digital marketplaces by facilitating interactions between service providers and consumers. The authors discuss how dual-user architectures enhance engagement and scalability. Despite these advantages, the study identifies trust-building and verification mechanisms as major challenges in such platforms.

The authors [4] analyze a performer portfolio management system that allows artists to upload videos and showcase their skills. Their findings show improved customer engagement and decision- making. Nevertheless, the system lacks booking workflow integration and admin moderation. This results in fragmented service management.

The authors [5] discuss a location-based service discovery platform that uses filters such as category, distance, and availability to improve search relevance. The system significantly reduces user effort by presenting more accurate and localized results. It enhances accessibility for customers seeking nearby service providers. However, performance issues arise when handling high volumes of concurrent users and real-time queries. The authors conclude that improved scalability strategies and query optimization are necessary for large-scale deployment.

The authors [6] focus on secure authentication and role-based access control mechanisms in modern web applications. Their study highlights how separating user roles improves data security, privacy, and controlled access to system resources. The approach ensures that sensitive operations are restricted to authorized users only. However, managing multiple roles increases system design complexity and maintenance effort. The authors emphasize the need for carefully structured access policies to prevent security loopholes.

The authors [7] propose a freelancer booking and scheduling framework that automates availability tracking and appointment management. The system minimizes scheduling conflicts by providing real- time updates and automated confirmations. It also improves communication between service providers and customers. Despite these advantages, the absence of admin verification mechanisms raises concerns regarding service authenticity. The authors identify quality control and trust management as key limitations of the system.

The authors [8] explore cloud-based backend solutions designed to support scalable and high- performance web platforms. Their research highlights improved data handling, efficient media storage, and reduced infrastructure maintenance through managed services. Cloud integration enables faster deployment and easier scaling under increased user demand. However, dependency on third-party providers introduces risks related to service downtime and vendor lock-in. Additionally, cost management becomes a challenge as storage and usage increase.

The authors [9] analyze secure transaction workflows implemented in online service marketplaces. Their study emphasizes the importance of encrypted data transfer and secure payment gateways to prevent fraud. Transparent transaction records improve trust between users and platform providers.

However, integrating payment systems increases overall system complexity and development effort. The authors also note that regulatory compliance and data protection standards must be carefully addressed.

The authors [10] review admin verification and moderation systems used in online marketplaces. Their findings show that admin-controlled approval processes significantly reduce fake profiles and fraudulent activity. Such mechanisms improve overall platform trust and reliability. However, manual verification increases administrative workload and processing time. The authors recommend partial automation to improve scalability and efficiency.

The authors [11] present a recommendation-based discovery system that ranks service providers using popularity metrics and user engagement data. The system improves customer decision-making by highlighting frequently booked and highly rated performers. Personalized recommendations enhance overall user satisfaction and platform usability. However, the approach may create visibility bias toward already popular performers. The authors suggest balancing recommendations to support new and emerging talent.

The authors [12] examine single-page applications (SPAs) built using modern frontend frameworks to improve user experience. Their study highlights faster page interactions, reduced reload times, and smoother navigation. SPAs enhance responsiveness, particularly in booking and dashboard-based systems.

However, improper state management can lead to security and performance issues. The authors emphasize the need for robust authentication handling in SPA environments.

Finally The authors [13] discuss database design and data normalization techniques for booking and scheduling platforms. Their research shows that well- structured schemas reduce redundancy and maintain data consistency. Proper relational design improves query efficiency and prevents data conflicts. However, handling concurrent booking requests remains challenging. The authors recommend transaction control and locking mechanisms for reliability.

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III. PROPOSED SYSTEM

The proposed Performer Discovery and Booking System is a full-stack, web-based digital platform designed to create a structured marketplace that connects talented performers with customers seeking entertainment services. The system addresses the limitations of informal talent discovery methods by providing a centralized platform for profile management, media-based verification, booking coordination, and administrative control. It enables performers to professionally present their skills while offering customers a reliable and transparent mechanism to discover and book verified performers. The application is developed as a single-page web application (SPA) using React with TypeScript, ensuring a responsive and interactive user interface across devices. The frontend consists of dedicated dashboards for performers and customers, as observed in the system interface, with modular components for profile management, video uploads, booking requests, and status tracking. Performers are provided with a comprehensive dashboard where they can create and update profiles, manage demo videos through a video management module, and monitor incoming booking requests. Customers interact with an intuitive browsing interface that allows them to explore performers using category-based navigation, location filters, and profile previews.

The backend infrastructure is powered by **Supabase**, which serves as the core platform for authentication, database management, and secure media storage. The system implements **role-based access control (RBAC)** to differentiate permissions for performers, customers, and administrators. Authentication is handled securely using email-based login and session management, ensuring that only authorized users can access protected resources. Performer profiles and uploaded media undergo an **admin verification process**, which plays a critical role in maintaining platform authenticity and trust.

A centralized relational database stores all essential data, including user profiles, performer details, booking records, event schedules, and media references. The booking module enables customers to request specific performers for selected dates and events through a booking modal interface. Real-time validation ensures that duplicate bookings and scheduling conflicts are prevented. Performers receive instant updates regarding booking requests and can accept or reject them based on their availability. All booking actions are logged to ensure transparency and traceability.

The system integrates secure cloud storage for handling large media files such as demo videos, ensuring optimized performance and controlled access. Admin dashboards provide tools for user moderation, performer approval, booking oversight, and data management. The admin interface allows administrators to review performer submissions, manage reported issues, and monitor overall platform activity. Popularity metrics and engagement data are tracked to enhance performer discoverability and customer decision-making.

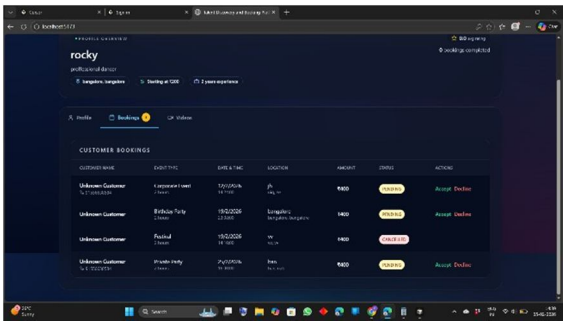
From a scalability and performance perspective, the platform is designed using modular components and efficient state management practices. The architecture supports future enhancements such as secure online payments, QR-based event passes for booking verification, automated notifications, and recommendation engines. By digitizing the entire workflow—from performer onboarding and media verification to booking confirmation and event management—the proposed system significantly reduces manual coordination, improves operational efficiency, and establishes a trustworthy digital ecosystem that benefits both performers and customers.

Integrated reputation management module that calculates performer scores using customer ratings and engagement metrics. This project proposes a digital performer discovery and booking platform that enables seamless interaction between performers and customers through a unified web- based system. The application operates on a dual- user interface model, allowing performers to create detailed profiles, upload demo videos, manage bookings, and track schedules, while customers can explore performers using category-based discovery, location filters, and profile insights.

IV. IMPLEMENTATION

A. Performer Profile Creation and Onboarding

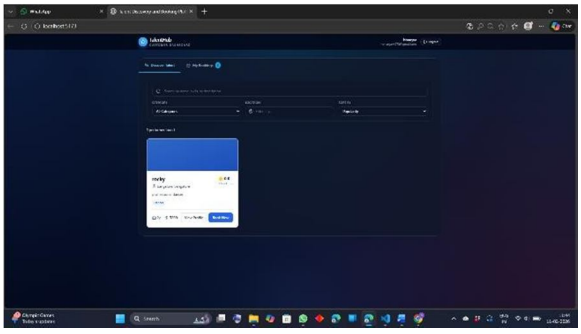
The Performer Profile Creation and Onboarding module serves as the primary entry point for performers joining the platform. After secure registration and login, performers are guided through a structured, multi-step profile creation process using an intuitive web interface. They are required to enter essential details such as name, performance category (music, dance, magic, etc.), experience, location, contact information, and a brief description of their skills. Frontend validation ensures accuracy and completeness of the submitted data. A key component of this module is the media upload functionality, where performers can upload demo videos showcasing their talent. These videos are securely stored using cloud storage and linked to the performer's profile. Once submitted, the profile enters a verification state. Performers can access a dedicated dashboard to view profile status and manage uploaded content. This module replaces informal promotion methods with a structured, professional onboarding process that enhances visibility and credibility.



B. Customer Discovery and Performer Browsing

The Customer Discovery and Performer Browsing module enables customers to explore and identify suitable performers through a clean and responsive user interface. Customers can browse performers using categorized listings based on talent type, location, and profile visibility. The system presents summarized performer cards displaying key information such as category, experience, and demo previews, helping customers make informed decisions.

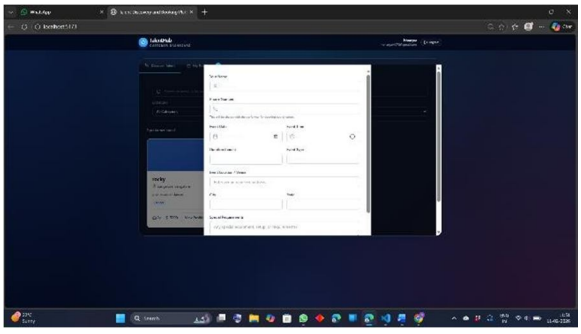
By centralizing performer discovery into a single platform, this module eliminates dependency on unreliable sources such as social media or referrals. Advanced filtering options allow customers to narrow results efficiently, reducing search time and improving relevance. By centralizing performer discovery into a single platform, this module eliminates dependency on unreliable sources such as social media or referrals. The streamlined browsing experience ensures accessibility and convenience for customers seeking entertainers for various events.



C. Booking Request and Scheduling Management

The Booking Request and Scheduling Management module allows customers to directly initiate booking requests for selected performers. Through a booking modal interface, customers can specify event details such as date, time, location, and special requirements. Before submission, the system performs real-time validation to prevent scheduling conflicts and duplicate requests.

Once submitted, booking requests are instantly reflected in the performer's dashboard. Performers can review event details and choose to accept or reject the request based on availability. Accepted bookings are recorded in the system database, and the booking status is updated for both parties. This module replaces manual coordination with an automated, transparent booking workflow.



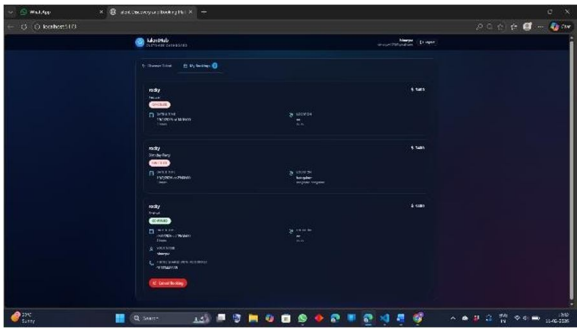
D. Admin Verification and Platform Control

The Admin Verification and Platform Control module provides administrators with a centralized dashboard to oversee platform operations. Admins can review newly created performer profiles, verify uploaded media, and approve or reject profiles based on authenticity and quality standards. This verification process ensures that only genuine and qualified performers are visible to customers.

In addition to profile approval, administrators can monitor booking activities, manage reported issues, and control user access. The admin panel ensures platform integrity, prevents misuse, and maintains trust between performers and customers. By consolidating moderation tasks into a single interface, this module improves operational efficiency and governance.

E. Automated Status Updates and Notifications

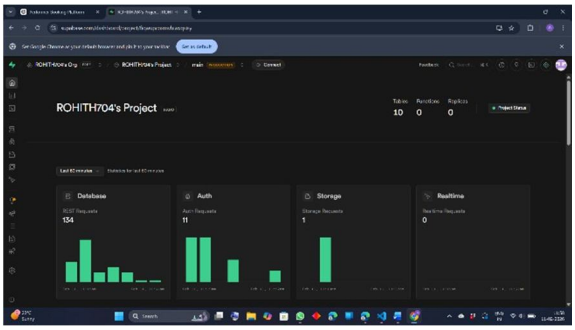
The Automated Status Updates and Notifications module ensures transparent communication between the system and users. Whenever a performer submits a profile, uploads media, or receives a booking request, the system updates the corresponding status in real time. Customers are notified about booking acceptance or rejection through their dashboards. This module eliminates the need for manual follow- ups and enhances user engagement by keeping both performers and customers informed at every stage. Real-time status updates improve reliability and ensure a seamless interaction experience across the platform.



F. Data Management and Reporting

The Data Management and Reporting module handles the secure storage and organization of all system data, including user profiles, booking records, media references, and verification logs. A centralized relational database ensures data consistency, integrity, and controlled access. Admins can generate reports related to performer activity, booking trends, and platform usage.

These insights help administrators monitor system performance and support future enhancements. By implementing structured data management practices, this module ensures scalability and long-term maintainability of the platform.



G. Rating and Reputation Management

The Rating and Reputation Management module enables customers to provide feedback and ratings after completed bookings, ensuring transparency and trust within the platform. Each performer receives a cumulative reputation score calculated using aggregated ratings and performance indicators such as booking completion rate and responsiveness.

The system applies validation and moderation mechanisms to prevent fraudulent or biased reviews. Ratings are displayed on performer profiles and influence search ranking and discoverability. By integrating a structured reputation model, this module enhances service quality, accountability, and overall platform credibility.

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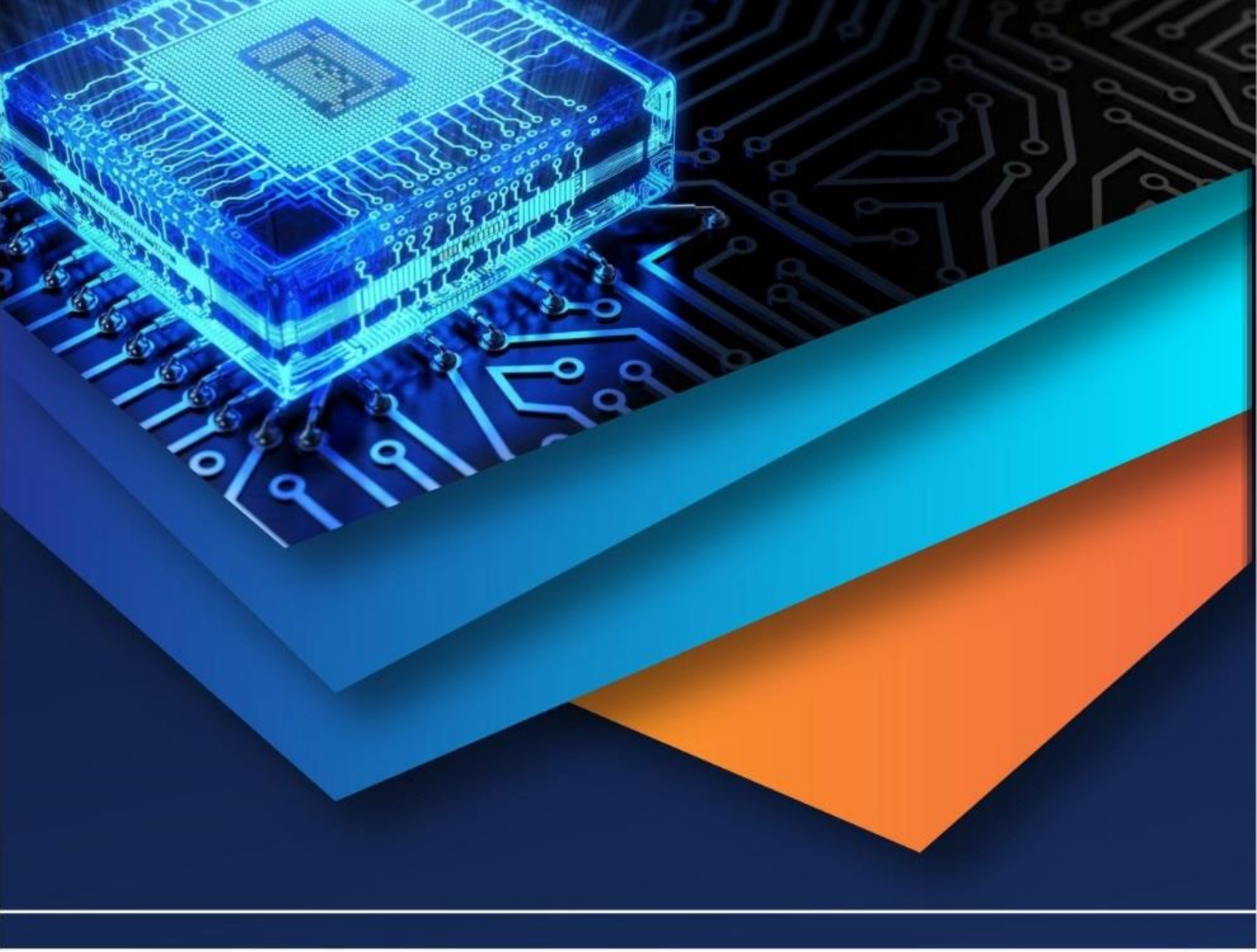
V. CONCLUSION

The proposed digital performer discovery and booking platform effectively addresses the challenges faced by talented individuals in gaining visibility and securing consistent opportunities, while also simplifying the process for customers seeking reliable entertainers. By implementing a dual-user interface, the system enables performers to showcase their skills through detailed profiles and demo videos, while customers can efficiently discover, evaluate, and book performers based on their preferences. The integration of secure authentication, role-based access control, and admin verification enhances platform reliability and trust. Additionally, the use of modern web technologies and cloud-based backend services ensures scalability, efficient data management, and smooth user experience. Overall, the system establishes a structured, secure, and scalable digital marketplace that fosters sustainable careers for performers and provides customers with convenient access to verified talent.

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