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A Student-Centric Mobile Platform for Extracurricular Talent Recognition (Skill streak)

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Abstract
Extracurricular activities play a significant role in the holistic development of students by enhancing creativity, communication skills, leadership qualities, and practical knowledge. Despite their importance, most academic evaluation systems continue to emphasize examination scores and grades, offering limited scope for students to receive structured recognition for their extracurricular achievements. As a result, many student talents remain undocumented, underrepresented, and difficult to showcase in a professional manner. This paper proposes a Student-Centric Mobile Application for Extracurricular Talent Recognition, aimed at providing a dedicated digital platform where students can systematically record, organize, and present their extracurricular skills and accomplishments. The system allows students to create personalized talent profiles, categorize skills based on activity domains, upload achievement details, and showcase certifications and participations. The platform is designed to be intuitive and accessible, ensuring ease of use for students from diverse educational backgrounds. The application is developed using the Flutter framework for cross-platform user interface development, with Dart for application logic and an SQL-based database for structured and secure data management. The system architecture ensures efficient data flow and responsive interaction. Initial usage and analysis indicate that the proposed platform improves visibility of student talents, promotes confidence in skill presentation, and supports institutions and evaluators in identifying capable individuals beyond academic performance. The proposed system effectively bridges the gap between academic-focused evaluation and extracurricular talent recognition, contributing to a more balanced and inclusive student assessment approach.

Keywords: *Extracurricular Talent Recognition, Student-Centric Mobile Application, Skill Profiling, Holistic Student Development, Flutter Framework, Talent Management System.*

1. Introduction
In recent years, the importance of extracurricular activities in student development has gained increasing attention in educational institutions. Participation in activities such as sports, cultural events, technical competitions, community service, and creative arts helps students develop essential skills including teamwork, leadership, communication, and problem-solving. These skills play a crucial role in shaping a student's personality and future career prospects. However, traditional academic evaluation systems continue to prioritize examination results, often overlooking the recognition of extracurricular achievements. most educational platforms and student information systems are designed primarily to manage academic records, grades, and attendance. As a result, students lack a structured and reliable medium to document and showcase their extracurricular talents in a

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professional and accessible format. Even when students actively participate in non-academic activities, their achievements are often scattered across certificates, physical records, or informal digital platforms, making it difficult for institutions and evaluators to assess their overall capabilities.

With the rapid growth of mobile technologies, digital platforms have become an effective solution for information sharing and personal profiling. Mobile applications offer accessibility, ease of use, and real-time interaction, making them suitable for student-centered systems. However, existing professional networking platforms are not specifically tailored to highlight student extracurricular activities, especially at early academic stages.

This paper presents a Student-Centric Mobile Application for Extracurricular Talent Recognition, which aims to provide a dedicated platform for students to systematically record, organize, and showcase their extracurricular skills and achievements. The proposed system focuses on usability, accessibility, and structured talent representation, enabling students to gain recognition beyond academic performance. By bridging the gap between academic evaluation and extracurricular development, the system supports a more holistic approach to student assessment and talent identification.

2. Literature Review

This section reviews existing studies and systems related to student profiling, talent management, and digital platforms used for skill recognition. The objective is to identify current approaches and highlight the research gap addressed by the proposed system.

2.1.Student Information and Academic Management Systems

Several studies have focused on the development of student information systems to manage academic records such as attendance, grades, and examination results. These systems improve administrative efficiency and academic tracking. However, most of these platforms are limited to curriculum-based evaluation and do not provide adequate support for recording extracurricular activities. As a result, non-academic achievements are often treated as secondary information or ignored completely, reducing opportunities for holistic student assessment.

2.2.Digital Talent Management Platforms

Digital talent management systems are widely used in professional environments to evaluate skills, experience, and performance. Some platforms allow users to create profiles and display achievements; however, these systems are primarily designed for working professionals. They lack student-specific features such as early-stage skill development, institution-based recognition, and extracurricular categorization. Additionally, these platforms often require professional experience, making them less

2.3.Mobile Applications for Skill Development and Recognition

Recent research highlights the growing role of mobile applications in education and skill development. Mobile-based platforms offer accessibility, portability, and ease of interaction, making them effective tools for student engagement. Some applications focus on learning enhancement or activity tracking, while others provide certification-based recognition. However, most existing mobile solutions emphasize learning outcomes rather than systematic documentation and recognition of extracurricular talents.

2.4.Limitations of Existing Systems

From the reviewed literature, it is observed that existing systems suffer from several limitations. There is a lack of centralized platforms dedicated to extracurricular talent recognition, insufficient integration of skill profiling with student identity, and minimal focus on user-friendly design for students. Moreover, existing solutions do not provide structured visibility of talents for institutions and evaluators in a student-centric manner.

2.5.Research Gap Identification

Although various academic systems, professional platforms, and mobile applications address skill representation in different forms, there is no dedicated solution that focuses exclusively on recognizing and showcasing extracurricular talents of students through a mobile-based platform. This gap

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highlights the need for a student-centric system that enables structured talent documentation, easy accessibility, and holistic recognition beyond academic performance. The proposed system aims to address this gap by providing a specialized mobile application designed specifically for extracurricular talent recognition among students.

3. Problem Statement

In most educational institutions, student evaluation systems primarily focus on academic performance, such as examination results and grades. While extracurricular activities contribute significantly to the overall development of students, there is no dedicated and structured digital platform to record, manage, and recognize these achievements. As a result, many students are unable to properly document or showcase their extracurricular talents in a professional and accessible manner. Existing student information systems provide limited support for extracurricular records, often treating them as optional or secondary data. Achievements related to sports, cultural activities, technical events, and community service are usually stored as physical certificates or scattered across informal digital platforms, leading to inconsistency and poor visibility. This lack of centralization makes it difficult for institutions, recruiters, and evaluators to assess students' non-academic skills effectively. Furthermore, current professional networking platforms are not designed specifically for students and do not adequately support early-stage talent recognition. The absence of a student-centric, mobile-based solution creates a gap between academic evaluation and holistic skill assessment. Therefore, there is a need for a dedicated system that enables students to systematically document, organize, and showcase their extracurricular talents through an accessible and user-friendly mobile application.

4. Methodology

The methodology describes the systematic approach followed in designing, developing, and implementing the Student-Centric Extracurricular Talent Recognition System. The development process focuses on usability, modular design, and efficient data handling to ensure a reliable and student-friendly mobile application.

4.1.System Development Approach

The proposed system follows a modular and iterative development approach. Each functional module is designed, implemented, and tested independently before integration. This approach improves flexibility, simplifies debugging, and ensures that individual components function correctly. User feedback is considered at each stage to enhance usability and overall system performance.

4.2.User Interface and Experience Design

The user interface is designed with a student-centric approach, emphasizing simplicity, consistency, and accessibility. A minimal colour scheme, clear typography, and intuitive navigation are used to reduce cognitive load. Card-based layouts and bottom navigation are implemented to enable easy access to key features. The user experience design ensures smooth interaction flow, allowing students to complete tasks such as profile creation and talent upload with minimal effort.

4.3.Functional Module Implementation

- The system is divided into multiple functional modules: User Registration and Authentication: Allows users to securely register and log in using valid credentials.
- Profile Management: Enables students to create and update personal and talent-related information. Talent and Achievement Management: Allows students to add, categorize, and describe extracurricular skills and achievements.
- Media Upload Module: Supports uploading certificates and related media for talent verification.
- Explore and Discovery Module: Facilitates browsing and searching of student talents based on categories.
- Each module communicates with the backend through defined interfaces to ensure smooth data exchange.

4.4.Technology Stack and Tools

The application is developed using the Flutter framework for creating a responsive and cross-

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platform user interface. Dart is used for implementing application logic due to its efficiency and compatibility with Flutter. An SQL-based database is employed to store user profiles, talent details, and achievement records in a structured manner. This technology stack ensures scalability, performance, and maintainability.

4.5.Data Handling and Storage

Structured data handling is implemented to maintain consistency and data integrity. User information, talent categories, and achievement records are stored in relational tables. Input validation mechanisms are used to prevent incorrect or incomplete data entries. The system ensures secure data access and efficient retrieval for display and search operations.

4.6.Testing and Validation

Functional testing is performed on each module to verify correctness and reliability. User interface testing ensures consistent layout and responsiveness across different screen sizes. Basic performance testing is conducted to analyse application responsiveness and data retrieval time. The testing process confirms that the system meets the intended functional and usability requirements. This methodology ensures a structured and efficient development process, resulting in a reliable mobile application that effectively supports extracurricular talent recognition in a student-centric manner.

5. Proposed Work

This section describes the proposed Student-Centric Extracurricular Talent Recognition System, which aims to provide a structured and accessible platform for documenting and showcasing students' non-academic skills and achievements. The proposed work focuses on designing a mobile-based solution that supports holistic student evaluation beyond traditional academic metrics.

5.1.Overview of the Proposed System

The proposed system is a mobile application designed to enable students to create comprehensive profiles that highlight their extracurricular talents. Unlike conventional academic systems, the application emphasizes skill-based representation and achievement documentation. The system provides a centralized platform where students can systematically store, update, and present their extracurricular activities in a professional format.

5.2.Objectives of the Proposed Work

The main objectives of the proposed work are:

To provide a dedicated platform for extracurricular talent recognition

To enable structured documentation of student skills and achievements

To improve visibility of student talents for institutions and evaluators

To encourage holistic student development

To ensure ease of use through a student-friendly interface

5.3.Functional Components

The proposed system consists of the following functional components:

User Authentication Module: Enables secure registration and login for students.

Talent Profile Module: Allows students to create and manage detailed talent profiles.

Achievement Management Module: Supports adding, editing, and categorizing extracurricular achievements.

Media Upload Module: Enables uploading of certificates and supporting documents.

Explore and Discovery Module: Allows users to search and view talents based on categories and interest

5.4.Workflow of the Proposed System

The workflow begins with user registration and authentication. Once logged in, students complete their profile details and add extracurricular talents and achievements. The submitted information is stored securely in the database and displayed through structured profile views. Other users, institutions, or evaluators can explore and view these profiles to identify talents based on specific skill categories.

5.5.Technology Utilization

The proposed system is developed using the Flutter framework for creating a responsive and consistent user interface across devices. Dart is used for implementing application logic due to its efficiency and seamless integration with Flutter. An SQL-based database is employed to manage structured data, ensuring data consistency and efficient retrieval.

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5.6.Significance of the Proposed Work

The proposed work addresses the limitations of existing academic systems by providing a student-centric solution focused on extracurricular talent recognition. By offering a centralized and digital platform, the system improves accessibility, visibility, and organization of student achievements. This approach supports a more inclusive evaluation process and contributes to the advancement of student-focused educational technologies.

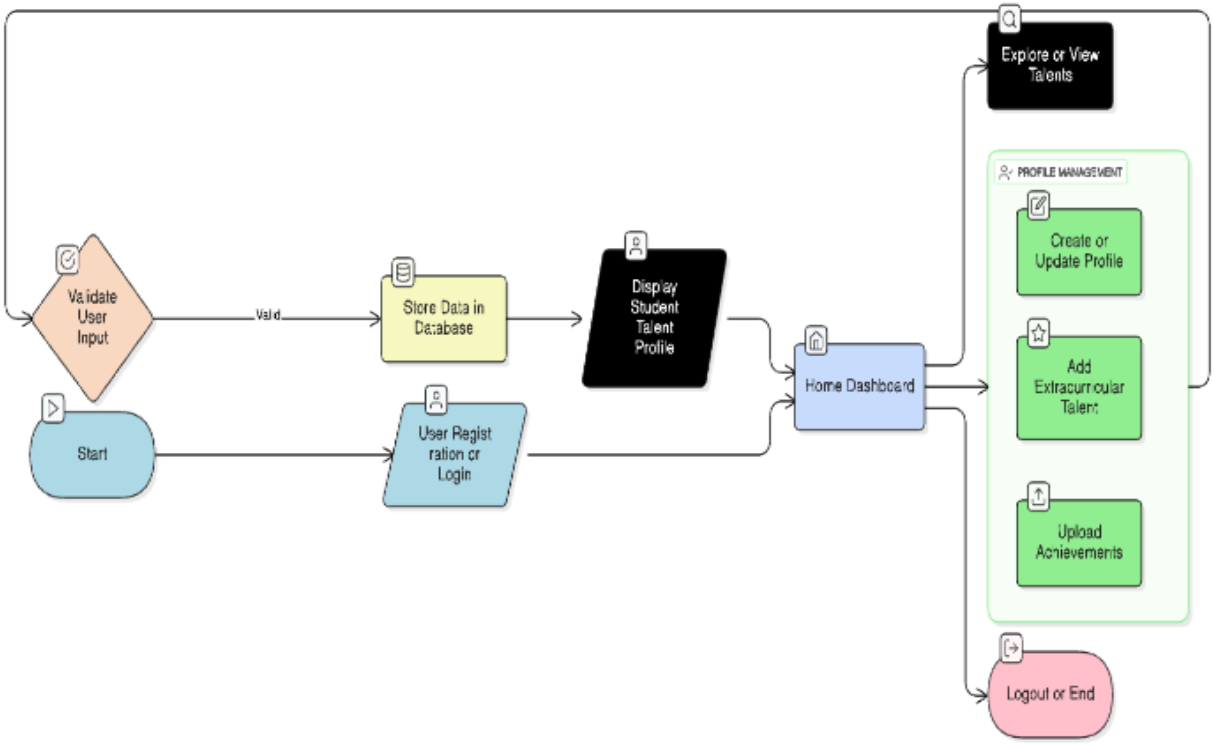

Figure 1 Data Flow Diagram for the Application

6. Results

This section presents the results obtained from the implementation and initial usage of the student-Centric Extracurricular Talent Recognition System. The results focus on system functionality, usability, performance, and overall effectiveness in supporting extracurricular talent documentation and visibility. The authentication interface, shown in Fig. 2, allows users to enter their login credentials to securely access the system. This screen validates the student's identity by verifying the provided email ID and password before granting entry into the talent showcase platform. It consists of clearly designed input fields for email and password along with a login button for submission. The primary purpose of this interface is to ensure that only authorized students can access, view, and update their talent profiles, thereby maintaining data security and user authenticity within the system. The dashboard interface, illustrated in Fig. 3, acts as a central hub that displays personalized information for each student along with quick access to the main features of the system. It includes a welcome message showing the student's name, a profile completion progress indicator, and talent cards highlighting the student's achievements. A navigation menu is also provided to allow smooth movement between

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different sections of the application. The main purpose of this dashboard is to give students a clear overview of their profile status and recent activities, thereby encouraging continuous engagement and active participation on the platform.

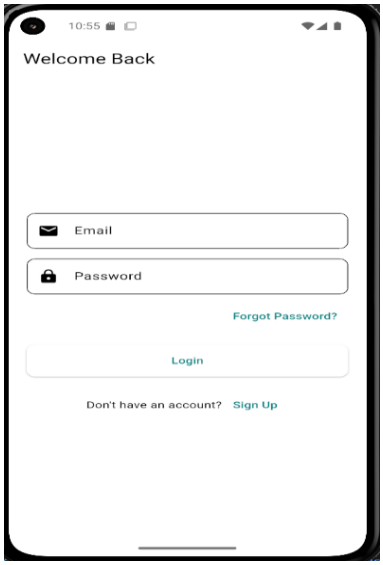

Figure 2 Shows The Authentication Interface for Secure Student Login

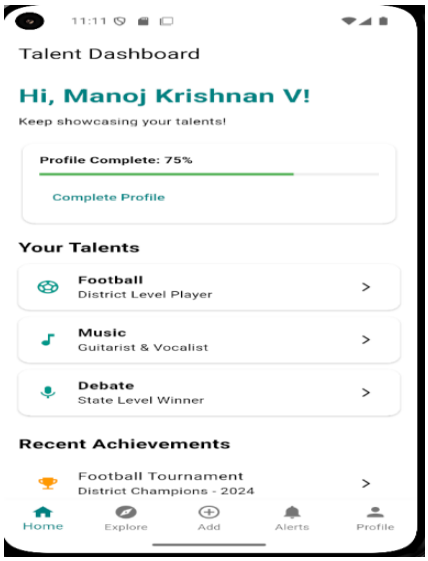

Figure 3 Shows The Student Dashboard

The discovery interface, as shown in Fig. 4, enables users to browse and explore the talents of other students within the platform. This screen includes a search functionality and category-based filters to help users easily find talents of interest. Student talent cards present brief details of individual achievements, while a trending talents section highlights popular or outstanding contributions. The purpose of this interface is to promote peer learning, inspire students, and encourage talent discovery and collaboration within the student community.

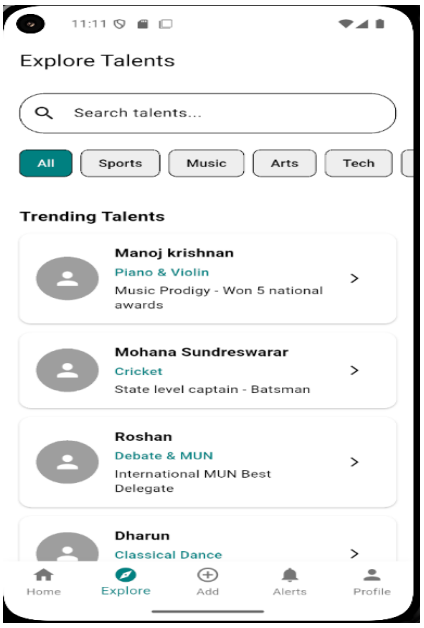

Figure 4 Shows The Discovery Interface for Exploring Student Talents.

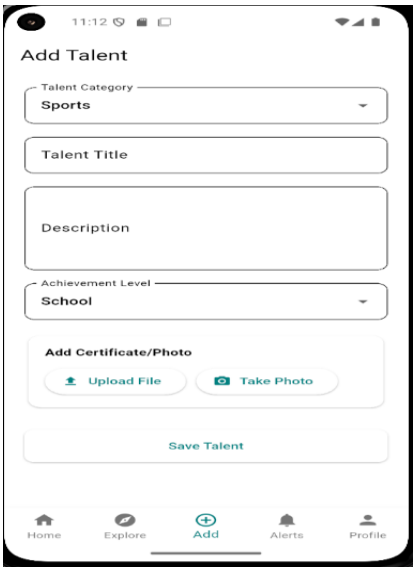

Figure 5 Shows The Achievement Input Form for Submitting Extracurricular Records

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The achievement input form, illustrated in Fig. 5, allows students to document and submit their new extracurricular achievements in a structured manner. This interface provides options for category selection along with input fields for the achievement title and detailed description. It also includes an achievement level dropdown and certificate upload options to support validation and authenticity. The primary purpose of this form is to simplify the process of recording talents, ensure organized data entry, and facilitate accurate verification of student achievements within the system.

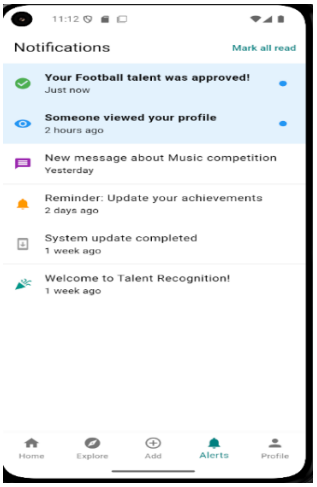

Figure 6 Shows The Notification Center for System Updates and Alerts

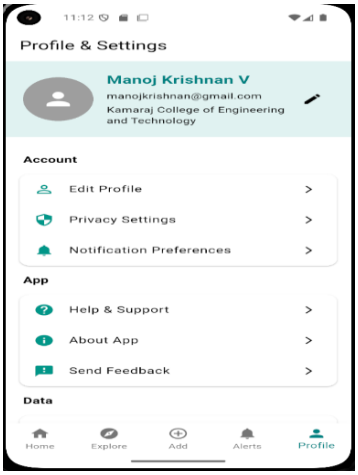

Figure 7 Shows The Settings and Profile Management Interface for Controlling Account Details, App Preferences, And Privacy Settings

The notification center, shown in Fig. 6, serves as an alert interface that displays system updates and user interactions in an organized manner. It includes time-stamped notifications with clear read and unread indicators, along with various notification types related to the system. The main purpose of this interface is to keep students informed about important activities such as profile updates, achievement approvals, and other system-related events, ensuring timely awareness and active engagement with the platform. The settings and profile management interface, illustrated in Fig. 7, functions as a user control panel for managing account details and application preferences. This screen displays essential profile information and provides options for account management, application settings, and privacy controls. The purpose of this interface is to give students complete control over their personal data and overall application experience, allowing them to customize settings while ensuring privacy and security within the system.

7. Summary of Results

Overall, the results indicate that the proposed system successfully meets its design objectives. The application provides an efficient, user-friendly, and student-centric platform for extracurricular talent recognition. The observed outcomes demonstrate the system's potential to enhance holistic student assessment and support structured talent documentation.

Conclusion

This paper presented a Student-Centric Extracurricular Talent Recognition System designed to address the limitations of traditional academic evaluation platforms that primarily focus on academic performance. The proposed mobile application provides a structured and accessible solution for students to document, manage, and showcase their extracurricular skills and achievements in a professional digital format. The system successfully integrates a user-friendly interface with efficient backend data handling, enabling students to create comprehensive talent profiles and improve the visibility of their non-

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academic accomplishments. The use of mobile technology ensures accessibility and ease of use, while the structured representation of talents supports institutions and evaluators in identifying student capabilities beyond examination results.

The results demonstrate that the proposed system meets its intended objectives by enhancing talent visibility, encouraging holistic student development, and offering a reliable platform for extracurricular recognition. Overall, the Student-Centric Extracurricular Talent Recognition System contributes to the advancement of student-focused digital solutions and supports a more inclusive and balanced approach to student assessment.

Future Works

The proposed Student-Centric Extracurricular Talent Recognition System provides a foundational platform for documenting and showcasing student talents. However, several enhancements can be incorporated in future to further improve the functionality, scalability, and impact of the system. One possible enhancement is the integration of intelligent recommendation mechanisms to suggest relevant skill categories, activities, or opportunities based on a student's profile and interests. This can help students better explore and develop their talents. Additionally, incorporating analytics and visualization tools can provide insights into skill distribution and participation trends at institutional levels. Future versions of the system can also include institutional verification and endorsement features, allowing faculty or authorized administrators to validate student achievements. This would improve the credibility and reliability of talent records. Support for cross-platform deployment, including web-based access, can further enhance accessibility and adoption. Moreover, the system can be expanded to include collaboration and feedback features, enabling peer interaction, mentoring, and constructive feedback. Integration with external certification platforms and event management systems can also strengthen the ecosystem for extracurricular talent recognition. Overall, these enhancements aim to transform the proposed system into a comprehensive and intelligent talent recognition platform that supports long-term student development and institutional evaluation.

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