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AI -BASED INTERNSHIP RECOMMENDATION ENGINE FOR PM INTERNSHIP SCHEME

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ABSTRACT

This paper presents an AI-based internship Recommendation System developed for the PM Internship Scheme to simplify internship management and improve student career guidance. The system is a wed-based platform built using python and the Django framework, enabling student to search, apply, and receive internship recommendations based on their skills and performance.it integrates as online test module with automates evaluation to assess student knowledge accurately and efficiently. A machine learning component is used to predict suitable job roles based on academic data and test results, helping students make informed career decisions. The system also provide a centralized database for managing internship details, ensuring decision-making, the proposed system improves the overall efficiency and effectiveness for internship allocation

Keywords : Artificial Intelligence, Internship Recommendation System, Machine Learning

Django Framework, Wed Application, Student Evaluation, Job Role Prediction, Assessment,
Carrer Guidance

1. INTRODUCTION

Internships are essential for gaining practical knowledge and industry experience, but finding suitable opportunities ids often difficult due to unorganized and lack of proper guidance. This paper presents an AI-based internship Recommendation System that provides a centralized platform for

managing internships efficiently. The system includes an online assessment module with automated evaluation and uses machine learning to recommend internship and predict suitable job roles based on student performance. Developed using python and Django, the system improves efficiency, reduces manual work, and support better career decision-making

2. LITERATURE TABLE

Smith et al. titled as developed as “wed-based internship management system” that centralized internship information, improving accessibility for students, but it lacked intelligent filtering and personalized recommendation.

Kumar and Rao. titled “focused on online examination system and highlighted that automated evaluation significantly reduces manual effort and error, though their work did not connect assessment result with internship opportunities.

Lee et al. titled “machine learning-based job recommendation system aimed at improving the relevance of job suggestions for users. The system typically used algorithms such as collaborative filtering and content-based filtering to analysis user profiles, including skills, education, and past preferences. By comparing this data with job descriptions, the system generated personalized job recommendations tailored to individual users.

Sharma et al. introduction a career prediction system using student academic data, which helped guide career decision but lacked real-time internship mapping. Ahmed et al. presented an AI-based recommendation model that improved prediction accuracy, although it involved higher computational complexity.

3. METHODOLOGY

a. Data Collection

The proposed AI-based Internship Recommendation System follows a structured methodology to ensure efficient internship management and accurate student evaluation.

The process begins with data collection, where student details such as academic information, skills, and qualifications are gathered during registration. internship data, Including job roles, requirements, and eligibility criteria, is entered and managed by the administrator in a centralized database.

b. Data preprocessing

Next, the system performs data processing, where the collected data is validated, cleaned, and organised to ensure consistency and accuracy. This step helps in removing incomplete or incorrect entries and prepares the data for further processing.

c. Online assessment module

The system then integrates an online assessment module, where students attempt multiple-choice tests based on their qualifications. The answers are evaluated automatically using predefined correct responses, and scores are calculated instantly. This ensures a fair and transparent evaluation process.

d. Performance analysis

Based on the test results, the system performs performance analysis. Students who achieve a score above a defined threshold (e.g.,60%) are considered eligible for recommendations. This ensures that internship allocation is based on actual skill levels rather than only academic records.

4. ALGORITHM

1. Qualification-Based Filtering

a. Collect student qualification and academic details.
b. Compare with internship eligibility criteria stored in the database.
c. Display internship that match the student's qualification.

2. Online Test Evaluation

a. Present multiple-choice questions to the student.
b. Compare student answers with correct answers.
c. Calculate total score automatically.

3. Eligibility Check (Threshold Method)

a. Define minimum score threshold (e.g.,60%)
b. Check student score against threshold.
c. Allow only eligible students for recommendation.

4. Machine Learning-Based Job Role Prediction

a. Collect student academic data and test score.
b. Apply machine learning model to analyse performance
c. Predict suitable job role for the student.

5. Internship Matching Process

a. Compare predicted job role with internship job roles.
b. Match required skills and qualification with student profile.
c. Filter relevant internship from database.

5. RESULTS

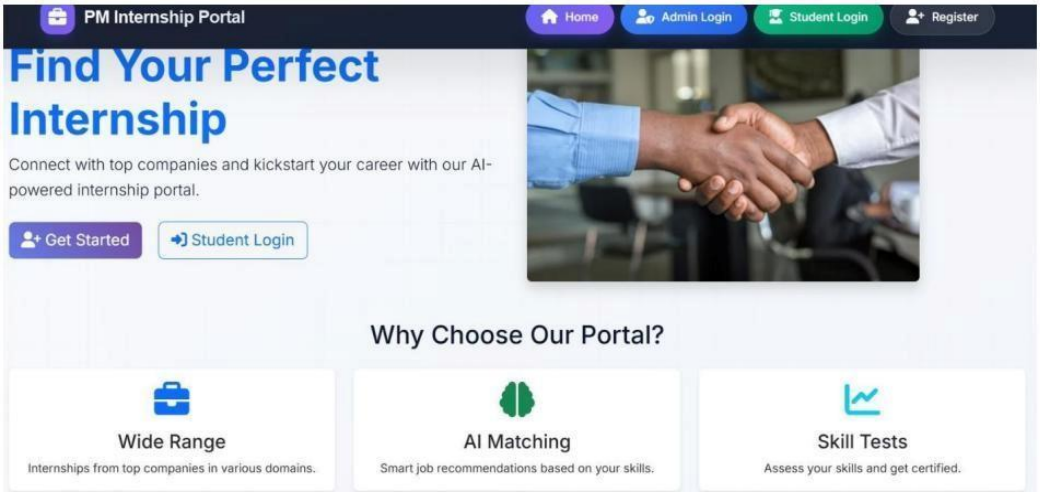


Fig 1: Portal Home Page

Kickstart your career with the PM Internship Portal, a smart platform designed to connect students with top companies across various industries. Whether you're beginner or looking to enhance your professional experience, our portal helps you discover internships That match your skills, Interests, and career goals. With our AI-powered system, finding the right opportunity has never been easier.

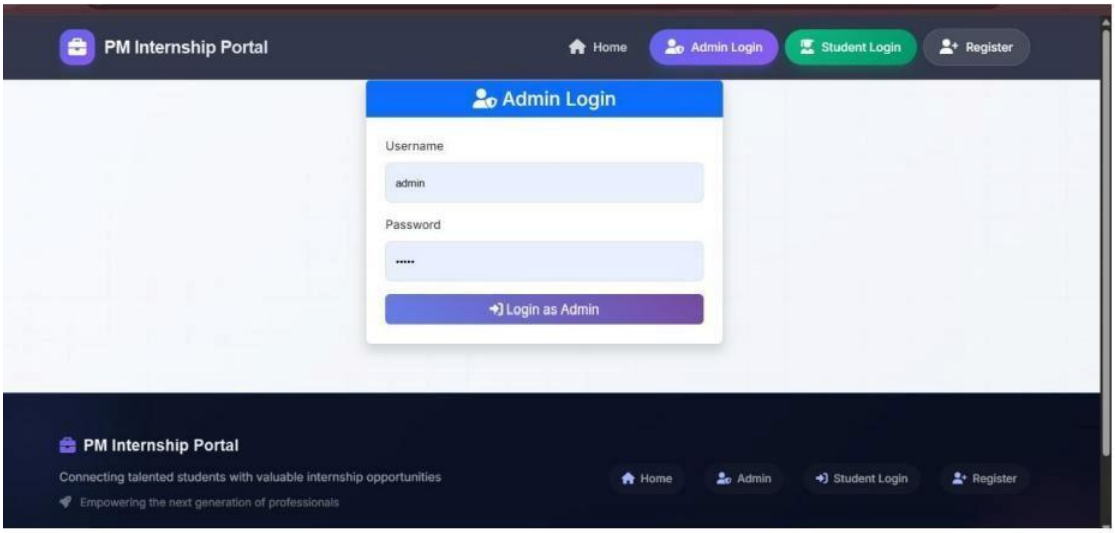


Fig 2: Admin Login

1. The Admin Login page provides secure access to the administrative panel of the PM Internship Portal. It is designed exclusively for authorized administrators to manage monitor all activities within the System. Administrators can log in using their unique username and password to gain access centralized dashboard. This dashboard allows them to effectively handle student registrations, internship posting, company details, and application tracking.

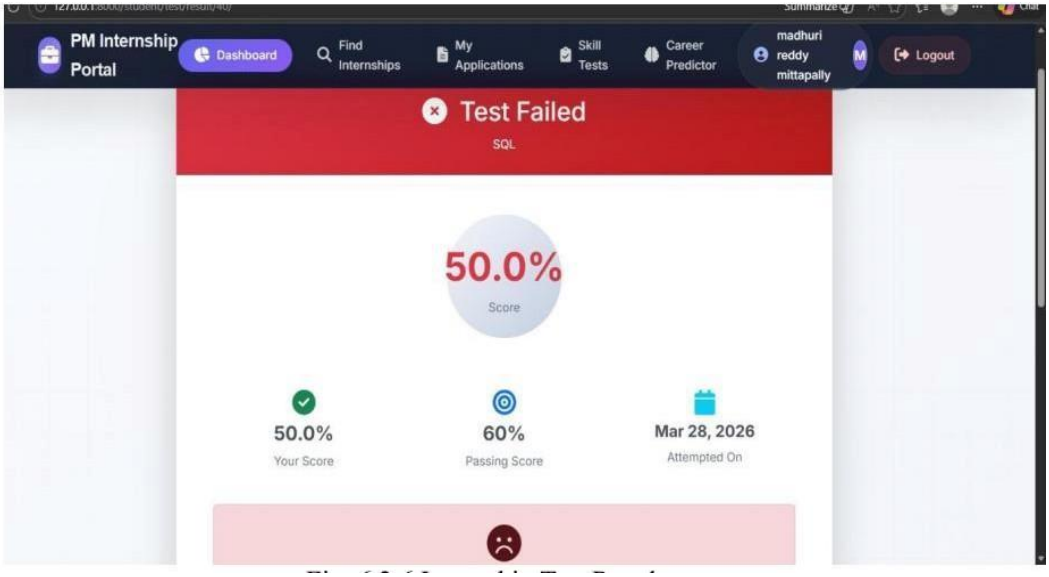


Fig 3 : Result of an SQL test on the PM Internship Port

2. The screenshot shows the result of an SQL test on a PM Internship Portal. The candidate scored 50%, while the required passing score was 60%, so the

text was not cleared. It indicates a basic understanding of SQL concepts but highlights the need for improvement. With more practice and revision, the candidate can achieve a better score in the next attempt.

6. CONCLUSION

The proposed AI-Based Internship Recommendation System provides an efficient and Intelligent solution to the challenges faced in traditional internship management. By Integrating a centralized platform with automated test evaluation and machine learning Based job role prediction, the system ensures accurate and skill-based internship recommendations. It reduces manual effort, improves transparency, and enhances decision-making for both students and administrators. The system not only simplifies the decision-making for both students and administrators. The system not only simplifies the Internship selection process but also offers valuable career guidance, making it a reliable Internship selection process but also offers valuable career guidance, making it a reliable and scalable solution for educational institutions.

7. FUTURE SCOPE

The system can be enhanced by adding features like company login, email/SMS notifications, and resume analysis for better matching. Advanced machine learning models Can improve recommendation accuracy. Integration with external job portals and cloud deployment can increase scalability and accessibility. A mobile application can also be developed to provide better use convenience.

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