



International Journal of Engineering Research and Science & Technology

www.ijerst.org

ISSN : 2319-5991

Vol. 21 No. 4 (2025)



ijerst.editor@gmail.com
editor@ijerst.com

Research Paper**COLLEGE HACKATHON REGISTRATION & JUDGING PORTAL****¹Alladi Harika, ²Bondu John, ³Kathi Daniel Christopher, ⁴Dr. P.V.S. Sarma**

^{1,2,3}U. G Student, Dept COMPUTER SCIENCE AND ENGINEERING, St. Ann's College Of Engineering and Technology, Nayunipalli (V), Vetapalem (M), Chirala, Bapatla Dist, Andhra Pradesh
– 523187, India

⁴Associate professor, COMPUTER SCIENCE AND ENGINEERING, St. Ann's College Of Engineering and Technology, Nayunipalli (V), Vetapalem (M), Chirala, Bapatla Dist, Andhra Pradesh– 523187, India

ABSTRACT

The College Hackathon Registration and Judging Portal streamline the entire hackathon management process by providing an integrated platform for registration, project submission, judging, and result declaration. Unlike traditional methods of conducting hackathons, which involve manual data handling, scattered communication, and increased chances of errors, this portal leverages automation and a centralized database to ensure efficiency, transparency, and reliability throughout the event lifecycle. By reducing manual effort, eliminating bias in judging, and providing instant updates throughout an intuitive interface, the portal ensures a smoother hackathon experience for participants, judges and administrators. Ultimately, this system promotes fairness, efficiency and scalability, enabling institutions to conduct hackathons with higher engagement, productivity and impact.

KEYWORDS

Hackathon Portal, User Authentication, Registration System, Judging Portal, College Hackathon, Admin Dashboard, Student login, Judge login

Received: 16-10-2025

Accepted: 26-11-2025

Published: 05-12-2025

I. INTRODUCTION

The planning, execution, and evaluation stages of a college hackathon are streamlined by the College Hackathon Registration & Judging Portal, a centralized digital solution. It makes it simple for participants to sign up, either alone or in groups, and offers choices for updating team information, submitting project files, GitHub links, or demo videos by the deadline. In order to assess allocated contributions, rate them according to predetermined criteria including creativity, functionality, design, and presentation, and offer helpful criticism, judges are granted secure access to a specialized evaluation panel. Additionally, the site provides event planners with strong administrative features that let them oversee registrations, confirm participant eligibility, allocate judges to

particular projects, track assessment progress, and create automatic leaderboards that display results in real time. By protecting all project data, avoiding bias, and preserving judge anonymity during scoring, the method guarantees fairness. Because participants can check their submission status and final results online, it also increases transparency for them. The portal is a flexible and dependable solution for contemporary competitive events because of its responsive design and scalability, which allow it to be utilized for both small-scale college events and huge inter-college hackathons.

II. LITERATURE SURVEY

Recent years I explored some related papers to College hackathon registration and judging portal in that I got some limitations. To check paper I studied recent papers. In that first

paper will be proposed by Sharma et al.2019 designed a cloud-based two-phase registration portal featuring participant verification, secure authentication, and automated ID generation. The second paper is proposed by Mehta and Raghavan.2020 introduced a data-driven classification model that groups participants by skills and roles, improving event structure and judge allocation. Their clustering-based approach enhanced efficiency in managing hackathon participants and scheduling. Ahmed et al.2022 developed a gamified leaderboard using a pyramid-based tier model to classify participants into Top Performers, Potential Winners and Emerging Talents. This approach enhanced engagement and motivation by recognizing a broader range of participants.

III. RELATED WORK

The project is built using a combination of modern web technologies to ensure smooth functionality, scalability, and user engagement. The frontend is developed using HTML5, CSS3, and JavaScript frameworks such as React.js or Angular to create an interactive and responsive user interface. Several studies have explored digital solutions for managing academic and competitive events. Sharma et al. a web-based college event registration system that automated participant verification and cloud-based data management, reducing administrative workload significantly. Mehta and Raghavan proposed a data-driven participant grouping framework that improved team formation and judge allocation efficiency using clustering techniques.

IV. EXISTING SYSTEM

The system uses a two-phase registration process, starting with participant pre-verification followed by secure database storage in the cloud. Participants register via a web-based portal and receive email confirmations along with automatically generated unique IDs. Organizers can create hackathon events with details like deadlines, problem statements, and prizes.

Judges access a separate portal to view submissions, assign scores, and provide feedback. The system integrates secure authentication and access control to ensure authorized participation. Automated workflows, including ID generation and notifications, significantly reduce manual administrative workload. Overall, it provides a centralized, transparent, and efficient platform for managing registrations and evaluations.

PROPOSED SYSTEM

By incorporating contemporary technologies, the suggested hackathon portal improves the current web-based approach for increased security and efficiency. With AI-based document checks and OTP/email authentication, it has improved its two-phase registration process with participant pre-verification. Individuals or groups can sign up, submit projects using files or Git hub links, and monitor their progress using leaderboards and real time dashboards. Rubric based scoring and optional AI assisted recommendations are used to assign judges automatically and ensure fair review. For safe and scalable data management, the platform makes use of cloud storage provides like AWS, Firebase or Azure. All users are guaranteed safe access. Participants are kept updated on announcements and deadlines using automated alerts sent by email, SMS or push messages. All things considered, it offers a centralized, interactive and safe way to handle hackathon entries, submissions and evaluation.

SYSTEM ARCHITECTURE

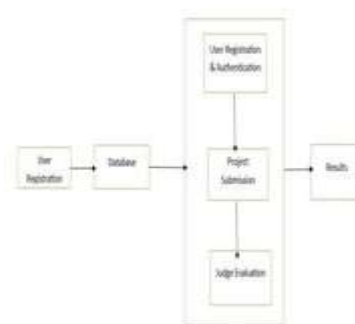


Fig:1 Architecture of college hackathon registration and judging portal

METHODOLOGY DESCRIPTION

User Registration and Authentication:

Creating a safe registration and login process for administrators, judges and participants is the first stage. This entails strong encrypted passwords, validating inputs and allocating responsibilities to users.

Project Submission Module:

Participants can upload project details, such as the title, description, files and links using the project submission module. The system verifies the correctness of the project information, file formats and submission deadlines.

Judging and Evaluation Module:

The administrator assigns judges to particular projects. Each project is graded according to predetermined standards. For further aggregation, the scoring form is kept in the database.

Result Publication:

Participants can view the final findings after they are published. Administrators can also download reports from the system for their records.

V. RESULTS AND DISCUSSION



Fig :2 Home page of the Hackathon Portal

A web-based platform called the College Hackathon Registration and Judging Portal was created to encourage creativity, innovation and teamwork among colleges. It gives judges a smooth interface to review and score submissions, lets students present their creative ideas.

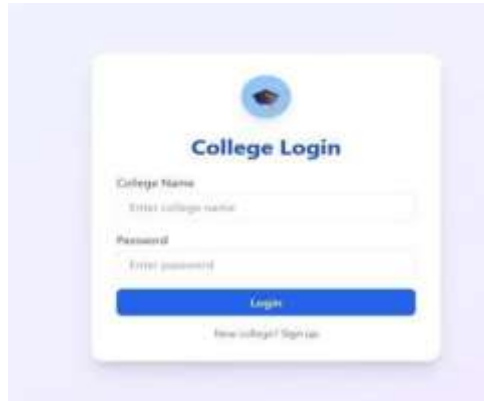


Fig :3 College Login Page

Colleges can create an account and securely log in. Colleges can post new hackathons by providing details.

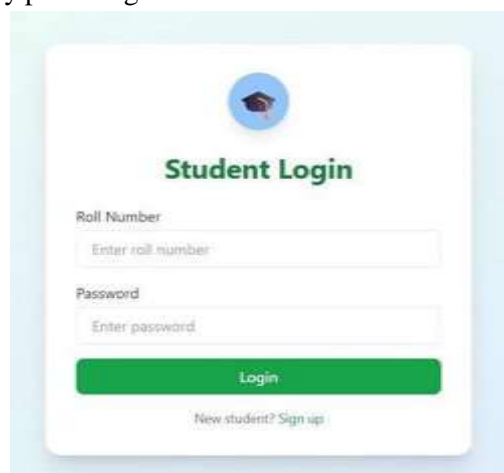


Fig 4: Student Login Page

Students log in using their roll number and passwords. Students can view the list of active hackathons posted by their college and students can track their participation and performance across hackathons.

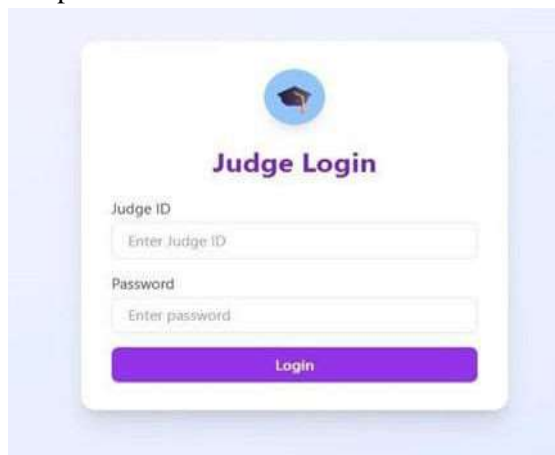


Fig 5: Judge Login Page

Judges' login using Judge ID and Password provided by the college. Judge can view assigned student submissions along with details. Judges provide scores to each

submission, ensuring a structured evaluation process.

VI. CONCLUSION

In Summary, the College Hackathon Registration and Judging portal is a complete solution that streamlines hackathon administration by automating crucial procedures including project submission, registration, judging and result.

FUTURE SCOPE

Upcoming iterations of the site may incorporate AI to help judges by evaluating project entries, identifying instances of plagiarism and generating initial scores according to present standards. In similar vein, integrating live demo scheduling or video conferencing APIs might enhance teamwork during online or hybrid hackathons.

REFERENCE

- [1] Harini, D. P. (2011/10). Consistency Management Strategies for Data Replication in MANET. CIIT International Journal of Networking and Communication Engineering.
- [2] P. P. Ray, "A System for Hackathon Management and Collaboration," International Journal of Computer Applications, vol. 182, no. 42, pp. 1- 6,2019.
- [3] N. Kumar, A. Gupta, and S. Bansal, "Event Management Systems using Web Applications," International Journal of Innovative Research in Computer and Communication Engineering, vol. 8, no. 6, pp. 3456-3462, 2020.
- [4] A. T. Nguyen and M. T. Tran, "Design and Implementation of an Online Event Registration Portal," International Conference on Information and Communication Technology (ICICT), pp. 102-108, 2021.
- [5] M. Sharma and V. Gupta, "A Web-based Application for Student Event Registration and Management," Journal of Emerging Technologies and Innovative Research, vol. 7, no. 4, pp. 290-295, 2020.
- [6] R. Singh and K. Kaur, "Smart Event Management Portal for Academic Institutions," International Journal of Engineering Research & Technology (IJERT), vol. 9, no. 5, pp. 1120-1125, 2020.
- [7] A. Patel, "Automated Judging Systems for Hackathons and Coding Competitions," International Journal of Computer Science and Information Security (IJCSIS), vol. 18, no. 12, pp. 55-60, 2020.
- [8] H. S. Saini and M. Bansal, "Web- based Registration and Evaluation System for College Events," International Journal of Scientific Research in Computer Science, Engineering and Information Technology (IJSRCSEIT), vol. 6, no. 2, pp. 320-326, 2021.
- [9] J. Lopez and S. Kim, "Digital Platforms for Collaborative Learning through Hackathons," Journal of Computing in Higher Education, vol. 32, no. 4, pp. 715– 732, 2020.
- [10] Peddarapu, R. K. (2025). Smart Hackathon Management System with Machine Learning Integration. ResearchGate.
- [11] Mhadse, B., & Bhande, B. (2023). Hackathon Management System with Blockchain Integration. IRJMETS.
- [12] Vaghasiya S.& Jawdekar, A. (2025). Event Planning and Organizing Portal. ResearchGate.
- [13] Kitsios, F. (2023). Digital Innovation and Entrepreneurship through Open Data. ScienceDirect.
- [14] Schoeb, D. (2020). Randomized Controlled Trial Using the Hackathon Format. International Journal of Medical Research.
- [15] Lopez, J., & Kim, S. (2020). Digital Platforms for Collaborative Learning through Hackathons. Journal of Computing in Higher Education.
- [16] Singh, R., & Kaur, K. (2020). Smart Event Management Portal for Academic Institutions. International Journal of Engineering Research & Technology.
- [17] Patel, A. (2020). Automated Judging Systems for Hackathons and Coding Competitions. International Journal of Computer Science and Information Security.

- [18]** Chen,Z. (2023). An Empirical Study on Online Judge Tests. ISSTA.
- [19]** Wasik, S. (2017). A Survey on Online Judge Systems and Their Applications. Ar X iv.
- [20]** Event Combo (2025). Event Registration Form: Design, Implementation, and Best Practices. Event Combo.
- [21]** Patil, P., & Pawar, S. (2019). Design and Implementation of an Online Event Registration Platform. Studocu.
- [22]** Sharma, M., & Gupta, V. (2020). A Web-based Application for Student Event Registration and Management. Journal of Emerging Technologies and Innovative Research.
- [23]** Oyetade, K. (2023). Evaluating Student Satisfaction with Online Hackathon for IT Projects. EJMS.
- [24]** Falk, J. (2025). How Do Hackathons Foster Creativity? Towards Understanding the Role of Hackathons in Innovation. ACM Digital Library.