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CAMPUS SHIELD - ANTI RAGGING COMPLAINT PORTAL

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Abstract: Ragging remains a persistent problem in most colleges and a large number of students still show hesitation in reporting whatever they experience or witness [6], [7]. Most of the existing channels for reporting, such as helplines or complaint boxes or even emails, either ensure no confidentiality or are not easy to use, which leads to many incidents going unnoticed. This lack of a safe and dependable system creates fear among students and limits the institutional ability to act in time.

In order to tackle such challenges, the Campus Shield portal is designed as a secure and user-friendly digital place where complaints can be submitted by students on a confidential or anonymous basis. Evidence could be uploaded in the form of images or videos, besides tracking the complaint progress. The included administrative dashboard will, in turn, help the authorities to review the complaints and act upon them as quickly as possible. Strong data protection along with a structured workflow forms part of the portal for ease of reporting, building trust, and aiding quicker intervention[1].

Keywords: Anonymous Reporting, Student Safety, Secure Complaint System, Anti Ragging Portal, Campus Security.

I. INTRODUCTION

It has remained a constant headache in most colleges and universities, causing emotional, physical, and academic harm to the students[7]. Even though strict rules and awareness programs, incidents remain underreported due to fear among students of retaliation or humiliation, or possibly lack of confidence in the complaint portal[6],[9]. To help address such challenges, a Campus Shield portal was developed as a secure, easy, and anonymous method of reporting incidents of ragging. It enables students to file complaints anonymously, check the status of their complaints, and attach any evidence in support whenever necessary. On the other hand, the administration would get information in real time, with structured case management for them to take action far quicker. Campus Shield will enable campus accessibility through trust and transparency to help build a safer, more responsible community.

II. METHEDOLOGY

The Campus Shield Anti-Ragging Complaint Portal was developed using a student-focused survey and system-based approach. Firstly, existing anti-ragging platforms were reviewed; secondly, A pole was prepared and given to students to understand their awareness, experiences, and expectations. Responses were collected anonymously to ensure clear insight [2], [6]. The architecture of the system has three parts: a frontend, backend, and database. The front end will consist of a user interface that will look after complaint submission, tracking, and notification. Authentication, complaint processing, analytics, and admin controls go to the back end. API integrations are made for seamless communication between these modules. The next step involves pattern identification in complaints by AI/ML models, predicting high-risk areas, and recommending prioritized actions[1],[3]. The main modules are as follows: User Registration/Login, Complaint Submission, Complaint Tracking, Admin Dashboard, Scheme Explorer (for anti-ragging schemes), Expensive Tracer, Market Tracker for monitoring campus safety trends, and a Notification System.

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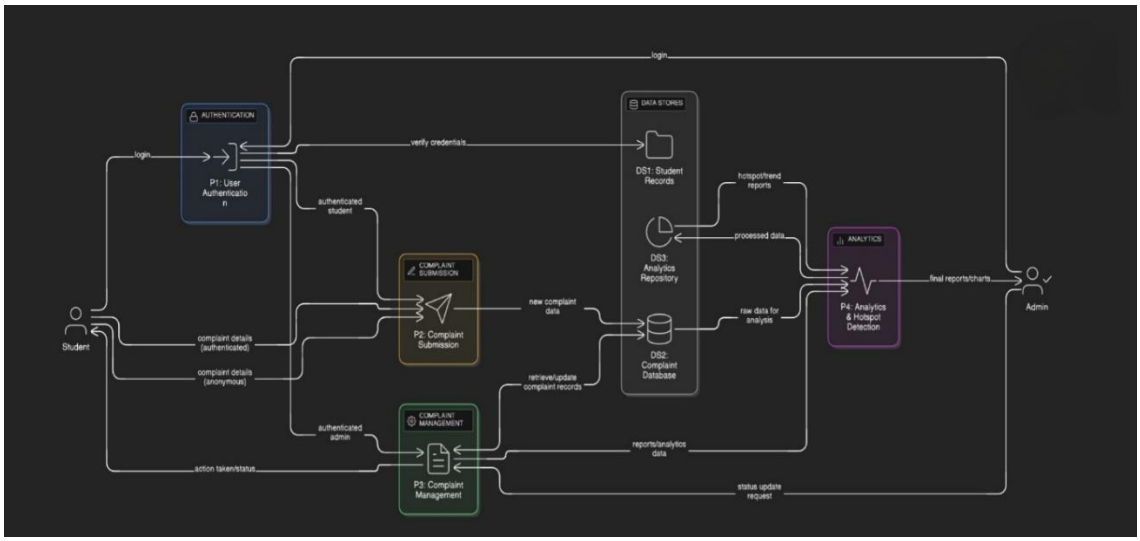

Figure 1: Architectural diagram of the project.

III. LITERATURE REVIEW

SL NO	YEAR PUBLICATION	TITLE	DESCRIPTION
1	2025	Detecting School Physical Bullying With Wi-Fi and Deep Wavelet Transformer	A system that makes use of Wi-Fi signals in order to detect physical bullying, especially in places that do not have camera coverage. In the proposed framework, a Residual Wavelet Transformer Network is employed for end-to-end noise reduction and action feature extraction; thereafter, the two temporal data-augmentation techniques are introduced in order to enhance model durability by simulating bullying behavior variations. Experimental tests conducted with 20 volunteer pairs show that Bully Detect achieves high accuracy in detection, outperforming the conventional approaches, including Long Short-Term Memory, ResNet-1D, and Vision Transformers. The results indicate that Wi-Fi sensing provides a scalable, retiring, and effective method for the real-time physical bullying detection that will contribute to campus safety. [1]
2	2024	Cyberbullying Detection and Abuser Profile Identification on Social Media for Roman Urdu	Ragging remains one of the most determined problems in educational institutions, often causing severe psychological and physical distress among students. Despite the existence of regulation, many victims still hold back from reporting incidents due to the lack of a secure, anonymous, and accessible complaint mechanism. This paper introduces Campus Shield, a digital anti-ragging complaint portal that enables anonymous reporting, real-time complaint tracking, and secure evidence submission. The system integrates state-of-the-art web technologies to ensure data confidentiality, faster and improved administrative accountability. Campus Shield provides a seamless and user-

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			friendly platform to report incidents with no fear, thus serving to assist the growth of the institution in ensuring a more safe and transparent campus environment. Through this proposal, an attempt has been made towards improving the anti-ragging initiatives through digital interference and efficient case management. [2]
3	2023[1]	Machine Learning Techniques to Detect Cyber Bullying	Cyber bullying has become a major cause of concern with the rapid rise of social media. This occurs mainly in linguistically diverse regions, especially in India, where Hinglish is an informal mixture of Hindi and English. It proposes a machine learning-based framework for detecting cyber bullying in Hinglish text based on various algorithms with NLP techniques. The proposals also include data preprocessing, tokenization, and TF-IDF vectorization by training models such as SVM, Naïve Bayes, Logistic Regression, Decision tree, and Random-forest. Experimental results on the dataset in Hinglish demonstrate that the SVM classifier achieves the highest accuracy and outperforms other models. This study has brought out challenges that non-standard language structures cause. It highlights the need for culturally sensitive awareness of the detection system. Future work is also suggested to include multilingual data sets and deep approaches integration.[3]
4	2023[2]	An Ensemble Transformers Approach to Detect Bullying in Campus Environments	Bullying has become increasingly prevalent in school, college, and other environments, causing psychological harm to students. The promising method of detecting emotional indicators in student language, which is in the form of questionnaire responses, uses 6 fundamental human emotions: happiness, anger, fear, sadness, disgust, and surprise. This system uses text pre-processing, TF-IDF waiting based on event detection to know sentiment analysis, and an ensemble mechanism to improve prediction accuracy amongst the students. Experimental evaluation using responses from 20 students to get the proposed model achieves superior performance compared with traditional machine learning and deep learning methods. It scores the highest F1 score among all tested algorithms. Results would be the indication that the framework effectively detects early stages of bullying and reduces emotional downstages..[4]
5	2023[3]	Role-Exchange Playing: An Exploration of Role-Playing Effects for Anti-Bullying in Immersive Virtual Environments	Bullying has turned to be an increasing trend within schools, colleges, and other environments, causing psychological harm to students. Early detection of student response patterns can help identify students at risk through questionnaire responses having 6 fundamental human emotions: happiness, anger, fear, sadness, disgust, and surprise. This work incorporates text preprocessing, TF-IDF features, PCA-based dimensionality reduction, and improves its

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			accuracy. Experimental evaluation with responses by 20 students to obtain the proposed model shows it outperforming the traditional machine learning and deep learning methods. It scores the highest F1 score among all the tested algorithms. Results would indicate that the framework effectively detects bullying at early stages and reduces emotional downstages, demonstrating the model's early detection ability in bullying cases for timely interventions. [5]
6	2023[4]	A Survey on Shared Perceptions, Help Seeking Patterns and Awareness of Cyber Bullying Among Bangladeshi Citizens	Awareness levels, help-seeking behaviours related to Cyber Bullying among Bangladeshi citizens in Bangladesh, women are the victims than the men; women experiences cyber bullying more frequently and their hesitate to file the complaints due to mistrust and social stigma in the society. Instead of seeking support from family members and known faces, instead they are facing the more consequences from their family for not to do some kinds of things. Respondence also expressed concerns about insufficient legal measures and awareness of protections. This study highlights the need for legal frameworks, digital literacy, support systems to the victims, and prevent cyber bullying in Bangladesh.[6]
7	2022[1]	Cyberbullying and Cyberviolence Detection: A Triangular User-Activity-Content View	Perception, awareness levels, and help-seeking behavior pertaining to Cyber Bullying among Bangladeshi citizens were gauged using the data collected from 897 responses from multiple professions in the major victims, with women who were affected by the Cyber Bullying victims mostly avoiding formal reporting due to fear and judgment, social stigma, and trust issues in the existing complaint channels. Few of the victims were found to be inadequate in terms of knowledge about legal awareness and digital safety practices. This study emphasizes the need for stronger legal frameworks to increase digital literacy and improvements in the support system to prevention, reporting, and response mechanism for cyber bulling in Bangladesh .[7]
8	2022[2]	The Influence of Bullying on Anxiety of Primary And Middle School Students Under Data Mining Technology	The impact of bullying on anxiety among primary and middle school students and explores the mediating role of social support. A survey conducted in China and Anhui-province where total number of students is 870 from grade 4 to 6. A survey conducted using standardized instruments including bully or victim questionnaire state-trait anxiety inventory the result shows positive corelation between anxiety bullying and victimization while the social support place negative corelation with anxiety structural equation modelling confirms social support partially mediates the relationship between bullying and anxiety this highlights the importance of strengthening the family friends and schools support systems to reduce bullying related anxiety and improve students well-being .[8]

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9	2021[1]	Towards A Safety-Enabled Strategy To Aid Authorities In Diagnosing Mobile Bully-victims In Rural High Schools of South Africa	Mobile bullies victims and bully victims were found majorly in South African Rural high schools. Safety enables strategy use for identifying those victims through a mobile bully-victim response system (M-BRS). Cyber bullying usually remains under-reported in rural contextures due to fear and inadequate reporting mechanisms. M-BRS integrates self-nomination, peer nomination, socio-grams, and severity assessment to advance the accuracy of diagnosis of cyber bullying. By using the design research approach, the system was evaluated by 10 great learners to confirm the roles of bullying, measures of severity, and recommended appropriate interventions. The result combines role identification and social influence matrices. The severity indicators provide a comprehensive method for enhancing Cyber Bullying detection in rural school environments. [9]
10	2021[2]	MOOC on bullying for primary school teachers	Bullying Cyber Bulling leads to need effective teacher training this study investigates existing MOOCS related to bullying prevention and evaluates their relevance for primary education Systematic literature review was conducted to identify other reliable courses pedagogicalapproaches technological features that supports teacher development based on this NUMOOC-stopIT was designed and accessed by pannel of experts and results indicates the MOOC represents while structured contents and accessible learning environment through improvement in interactive and task diversity MOOC are a flexible solution for teacher preparedness in identifying addressing bullying.[10]
11	2021[3]	Towards an App to Aid South African Crime Prevention Police in Diagnosing Mobile Bully Victims among School Children	The prevalence of mobile bullying victim behaviour among school learners is increasing globally; a student plays both roles, that is, bully others and experience victimisation themselves, so it is difficult to identify duel-role and lack of reliable reporting mechanism in South Africa; limited counselling capacity and uncleared policing roles constrain timely intervention. The mobile application design using design science research framework to assist low enforcement officers' diagnosis of mobile victims in schools. This application integrates anonymous nominations, behavioural confirmation, and severity assessment. Drawing on the ecological system theory, social information processing theory, and this theory of plant behaviour, the resulting tools support early detection that informs suitable interventions and enhances the effectiveness of crime prevention initiatives in educational environments.[11]
12	2021[4]	BullyNet: Unmasking Cyberbullies on Social Networks	Cyber Bullying on Social media poses a significant threat to users, and white spread nature of online content. In Bully net, a 3-phase algorithm is designed to detect a Cyberbullies on twitter. On

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			combining sentiment analysis, contextual conversations modelling, and signed-network analytics. At first, Bully Net reconstructs conversations to capture the contextual flow between users. Further, it builds Cyber bullying signed network(SN) suing bullying indicators derived from sentiment scores, con-signed similarity with abusive words list. At last, a novel attitude and merit centrality(A&M) measure identifies bullying users by analysing both incoming and outgoing edge behaviours. A survey conducted among 5.6 million tweets demonstrate that bully net achieves high accuracy and scalability compared to existing methods.[12]

IV. MODELING AND IMPLEMENTATION

The survey responses were analyzed to understand students' awareness, experiences, and how they report ragging incidents. Basic analysis showed key information, like how many students knew about anti-ragging rules, how often they saw incidents, and the ways they preferred to report them. Cross-tabulation was applied to find the relation between student demography and their awareness or experiences. Trends have been visualized using charts to identify areas that require attention[8]. A risk assessment model was then proposed to categorize complaints with regard to their severity and urgency to aid administrators in prioritizing appropriate action. AI/ML models were used to find recurring patterns, predict high-risk areas, and identify common complaint types to make the portal more proactive. The approach of modeling and analysis followed here makes Campus Shield cover student concerns appropriately, increasing safety while providing a data-driven, responsive, and user-friendly platform for reporting incidents of ragging.

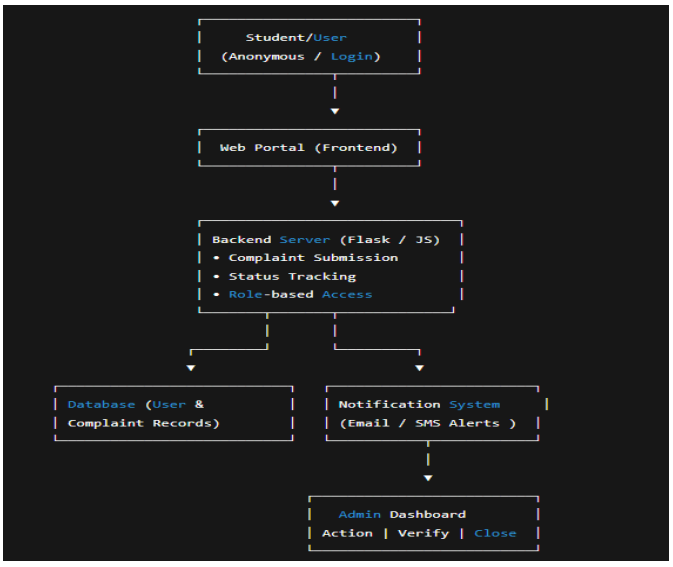

Figure 2: Flowchart of the project.

V. RESULTS AND DISCUSSION

Results

The Campus Shield portal was found to be easy to use, effective, and supported students who want to report ragging. The survey responses revealed that the students were more comfortable reporting the incident as the system allowed anonymity, strong protection of data, and an easy-to-fill reporting form[9]. The administrators also felt that the portal helped them receive complaints faster and respond in quick time.

Discussion

The survey shows that a safe, easy-to-use digital portal goes a long way in improving the reporting of incidents of ragging[6]. Students felt confident in the system since their identity was protected and clear steps for submitting

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complaints were laid out. Better communication between students and authorities now points to the fact that such platforms could mean much in forging a safe and supportive environment on campus.

V. CONCLUSION

Ragging remains a sensitive and underreported issue in educational institutions, Many students feel hesitant to use traditional complaint methods [6], [7]. The Campus Shield portal solves this by offering a safe, anonymous, and easy-to-use digital platform for submitting complaints. It enhances the transparency and responsiveness of incident handling by allowing the uploading of evidence, real-time tracking, and structural administrative handling of complaints. Its confidentiality principle ensures trust development among students, allowing them to report incidents without fear. The institutions benefit from the timely intervention and better monitoring of safety on campus. Campus Shield is, therefore, a practical and student-centered technological solution that strengthens anti-ragging initiatives to develop a more responsible, safe, and supportive academic environment.

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