E-News portal

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ABSTRACT

E News Portal is a college-centered communication portal to offer real-time updates of academic events, sports activities, cultural events, and placement notifications. The homepages provides Breaking news, Top 10 news, Categories which allows easy to user to read. This Enewsportal also includes an admin-user portal, which allows the admin to perform CRUD operations and manage users. Every authenticated user can have a user's Profile and dashboard which allows easy to perform CRUD (create, read, update, delete) operations. With Python and Django as the backend technology and HTML, CSS, and Bootstrap as the frontend technology, the portal increases campus interactions through personalized news feeds, user verification, and interactive features such as comments and feedback. Administrators can manage content with ease, providing timely and secure updates. Future developments include AI-powered content suggestions and a mobile app, enhancing user experience and engagement further.

Keywords: Django, real-time updates, news portal, campus communication, web application.

1.INTRODUCTION

It is important for students, staff and faculty to stay connected in the high-speed academic world today. Unfortunately, the facts are scattered over multiple platforms and it is impossible to know them all. To address this issue, the E News Portal was developed, meaning it accumulates all campus news and events in one place, it provides real-time information and provides more engagement. The portal is easy to use and its interface is interactive. In addition, it helps to keep the college community in touch and updated. It also helps to boost campus-wide communication.

A. Purpose:

The E News Portal has certain objectives in mind:

- Centralize Communication. Have all academic, extra-curricular and placement news on a readily available platform.
- Boost Engagement: Encourage engagement with content through comments, likes, and feedback for a more interactive campus life.
- Real-Time Updates: Provide updates and allow the community to access and know what is happening as at that time.
- Enhance Campus Connectivity: All users (students, faculty, and staff) should be connected whenever and wherever they are.

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B. Scope:

To create a portal that will have a user-friendly and flexible interface and will be:

- Real-Time Accessibility. It provides a single platform where users have the opportunity to access the latest updates at any place and any time.
- Easy Content Management: The use of a backend system that is easy to use for the administrators for the purpose of the updating and management of the content.
- Responsive Design: A web design that is friendly to mobile and portable devices including desktops, laptops, tablets, and smartphones.
- Future Enhancements: Additional features could be AI content recommendations for personalized experiences and a mobile app to make the platform available on the go
- [1-32].

2. LITERATURE SURVEY

A. Mobile Campus News Portals

- Findings: Mobile phone preference is explored. The participants cite convenience as a major factor contributing to the decision. Multimedia and push notifications have played a role in
- Study: Designing Mobile Interfaces for Campus News Portals: A Case Study of University Students (from IEEE Xplore, 2020) focuses on the mobile-first strategies and the enhanced back-end integration to deliver the instant news updates.
- Gaps: A lot of apps do not integrate backend well, hence, causing delays and poor user experience.

B. Social Media Integration

- Findings: Social media leads to more interaction and more exposure. It enhances communication within the campus.
- Study: The Role of Social Media in Enhancing Campus News Portals (Journal of Educational Technology & Society 2019) holds that social media enhances campus news portals. This occurs through social media being responsible for increased engagement, although it leads to information overload.
- Gaps (absence of content filtering and centralization): The absence of content filtering and centralization may lead to the loss of critical

C. Gamification and Engagement

- Findings: Gamification elements of points and leaderboards increases engagement and portal visitations.
- Study: The journal article use of gamification for engagement in university news portals (2022) determined that gamification causes activity, yet it is hard to maintain engagement (International Journal of Game-Based Learning).

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- Shortcomings. There is a difficulty in balancing competition with the interest of the user, and the gamification might lead to a delay in the presentation of news.

D. AI and Machine Learning in Campus News Portals

- Findings: AI-Based Personalization Increases Engagement with Tailored Content
- Study: Personalized Content Delivery in Academic News Portals Using Machine Learning Algorithms (Published in the Journal of Artificial Intelligence in Education, 2021)
- Gaps: Integration of AI is still at its infancy, hence inefficiencies in sieving relevant content.

E.Natural Language Processing for Automatic News Tagging (NLP)

- Research: "Automatic News Tagging and Categorization in Campus News Portals Using NLP" (IEEE Transactions on Education, 2020)
- Shortcomings. Tagging flaws still occur, especially with non-structured or informal news.

3. EXISTING SYSTEM

In Universities rely on old methods of communication, all of which are associated with several shortcomings.

1. **Notice Boards & Circulars**
   - Limitation: They are out of date, cannot be updated in real time, require physical presence and are not interactive. You may miss out on important information
2. **E-mail & WhatsApp Groups**
   - Limitations: The poor communication of the updates through several channels leads to the lost updates. No centralization or lack of the real time updating leads to the disoriented mode of the communication.
3. **College Website**
   - Limitations: It is static as it has limited or no real time updates, poor mobile optimization, and low user engagement as it lacks any form of interactivity.
4. **Social Media Pages**
   - Limitations: Disorganised, important vents are lost in the mix with extra unimportant vents. No moderation does not allow to find the necessary important news.

4. PROBLEM STATEMENT

Updating oneself at Every College is quite tricky. Discontinues sources such as noticeboards, emails, WhatsApp groups and social media do not deliver real time and centralized updates. The E News Portal intends to bring together all the updates to a single point and can be accessed instantly. These include academic notifications, events, exam timetables and placement drives.

5. PROPOSED SYSTEM

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E-News Portal has been developed to provide a rich, user-friendly website to the students and faculties where they can get news, updates, campus activities, etc. This project will have an Admin Panel to manage user accounts, moderate content, and system settings. Both students and faculties will have a secure email/password authenticated account to use the portal. The news articles published will be divided into categories such as Sports, Academics, Research, Placements, and Events. Users/Admin can search for the news and filter the news based on categories, dates, keywords. The portal will support multimedia (images, videos, social media embeds) and users can see the updates in real-time. i.e., when the admin publishes the news, it will be live. Every authenticated user can have a user's Profile and dashboard which allows easy to perform CRUD (create, read, update, delete) operations. The homepage provides to breaking news, Top Headlines, categories (Placements, academics, sports). The news article search and filter options are provided for better user experience. Authenticated user can performs CRUD operation on Article.

In Future User involvement will be commenting, discussing, and sharing articles on Facebook, Twitter, LinkedIn, and Instagram among others. The content moderation system will be role-based. The system admins will go through the articles first.

The portal has also been developed to be responsive and mobile friendly to ensure that users can access it using any device and still be able to enjoy its services. The backend for the portal will be powered by Django which offers a content management system that is flexible and easy to manage. The database to be used in the development of the portal will be SQLite, and MySQL will be used for production to ensure that data storage is secure and scalable.

6.WORKING PROCESS

A. Data Collection and Pre-Processing

- Collect and classify campus event information (news, pictures, and videos).
- Categorize the details into Academics, Placements, Cultural Events, and Sports.

B. Development Process

- Dynamic homepage supports mobile devices and displays current news and the main sections.
- Implement a CMS for updates and smooth content organization that is in real-time.

C. Admin and User Flow

1.Admin Flow

- Login: Admin's securely log in.
- Dashboard: Check the updates content to publish and see the analytics.
- Content Management (add, edit, delete news, media, add categories)
- Moderation: Keep the content accurate by moderating the comments.

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- To offer real time updates for the latest breaking news, featured articles, and many other popular categories.

2.User Flow

- Login/Registration: Secure log in for users.
- Profile/dashboard: Every authenticated user can have a user's Profile and dashboard
- Authenticate user is used to CRUD (create, read, update, delete articles) on Articles
- Navigation to breaking news, Top Headlines, categories (Placements, academics, sports).
- Browsing: Browse by categories.
- Interaction: Add comments or feedback to articles.
- Search: Admin/User can Find news and events with ease.

D. Model Evaluation

- User Testing: For Usability and Feature Feedback
- Refine platform according to feedback.

E. Deployment

- Host on a stable server for high uptime.
- Regularly update the content depending on the user wants.

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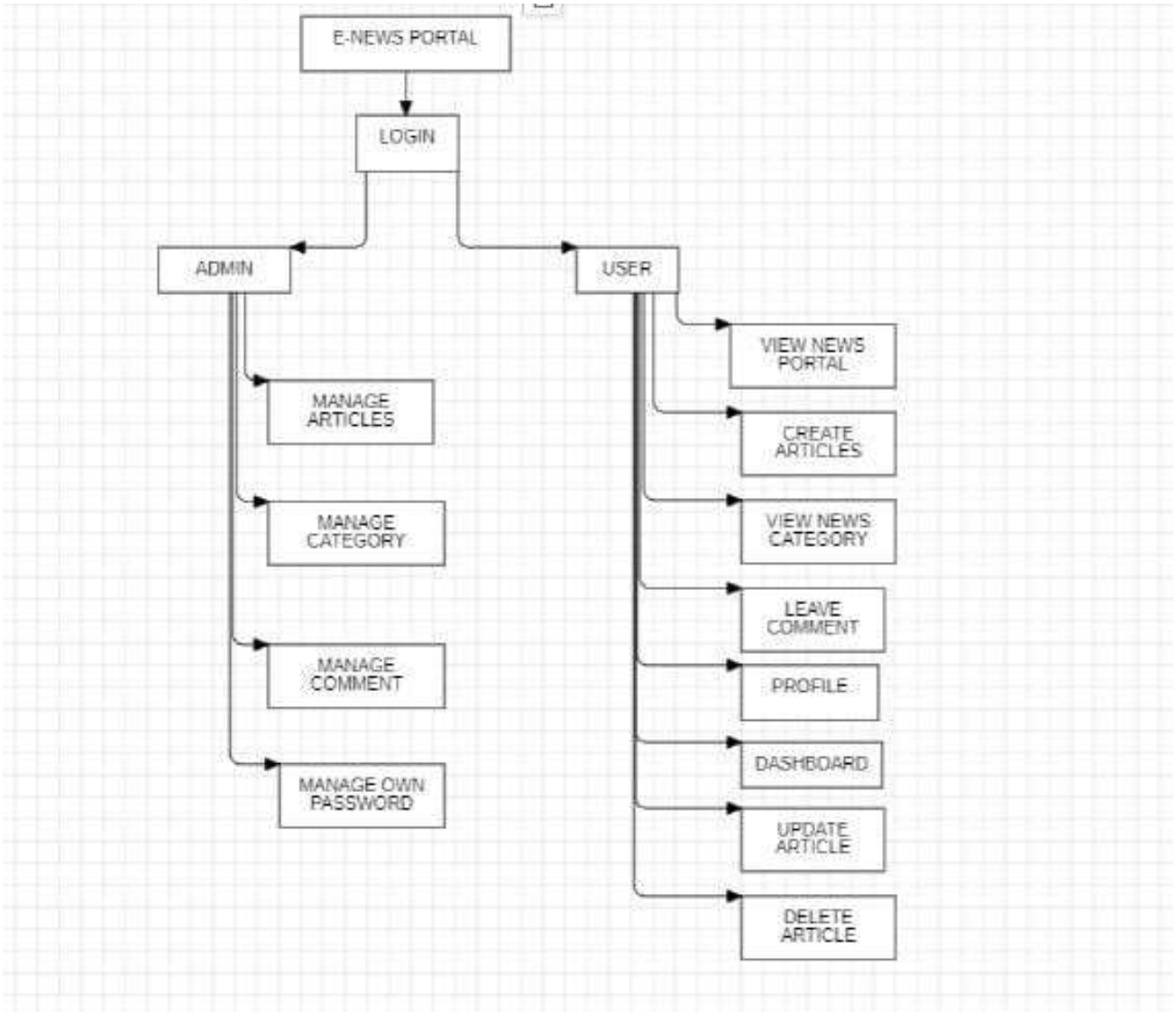

7. SYSTEM REQUIREMENT ANALYSIS AND DESIGN

A. Requirement Analysis

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- **User Authentication Enable users**: students faculty, and staff to register to log in, and to manage their profiles.
- **Content Management:** The capability should be provided to the admin so the admin can post and remove articles on the news, at the same time be able to edit them
- **Ensure real-time updates.** Make sure that news is updated instantly. It should be visible to users as soon as it's posted.

B. System Design

- **Frontend:** Built with HTML, CSS, Bootstrap, making the design look modern and responsive to any device.
- **Backend:** Django is a Python-based framework. The solution it provides is robust. It is also secure and scalable.
- **Database:** The team will handle data management through Django's ORM (Object-Relational Mapping) to ensure that articles, user data, and other content are dealt with optimally.

C. Main Modules:

- **User Authentication** which includes Registration, login, and password management for students, faculty, and staff.
- **News Management:** Admins have the ability to create, edit or delete any news items to ensure that the portal stays current with new information.
- **Commenting Feedback**: Students, Faculty can engage with content by leaving comments. Feedback on news articles.

8. ADVANTAGES

- Centralized Platform where you can find everything in one place and do not need different sources. etc.
- Real-Time Updates: Updates on exams placements, events are available all the time.
- User-Friendly Interface (Ease of Use): Browse the website, place an order, and download
- Security & Moderation: The administrators make sure that only the right amount of useful content is shared.
- Engagement: Students can easily engage with the content and give feedback.

9. LIMITATIONS

- Decentralization of Information: The information is spread across several platforms thus, one cannot find news in a central place.
- Limited real-time updates: Information is not passed on as soon as it happens.
- Poor User Engagement: There is no user interaction in the current procedures.
- Restricted Accessibility. Traditional means do not cater to all the students' accessibility issues. These are the students who are always on the move.

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10. FUTURE WORK

1. Push Notifications for Breaking News and Other Important Updates
2. Content Recommendations with AI: News Feeds Customized with AI Based on the Users Interest
3. Mobile application (native app): Also known as the native application. The native app is designed to serve push notifications in the real time to enhance the mobile accessibility.
4. Integration with Campus Management Systems
5. Although the current project is concentrated on the platform core functionality, in the future, additional features should be added, and more extensive integration into the campus management system should be developed. In the future, advanced AI features should be added to the platform. The goal is that the portal becomes user-centric, adaptive, and changes along with the needs of its users on the campus to provide a new level of interaction so that students and staff always know the latest information.

11. CONCLUSION

E-News Portal will be very beneficial to communication at the college. The portal will ensure that all college information is centralized in one place for easier access. The E-News Portal will provide real-time news updates, making sure that students, faculty, and staff are always kept abreast with the latest information. Currently, there are many platforms being used to communicate college information. These platforms can be overwhelming for some students, leading to missed information. The E-News Portal aims at fixing this since it delivers all the news in one place. This makes it easier and more convenient for students to access information.

In the future, it's planned to add AI-based content recommendations to the portal. In such a way, the portal will become even smarter and more personalized. The AI will analyze what content users prefer to read and then offer the most relevant news, events, and announcements. As for the mobile app, it will allow users to read the portal even on the go. So, users will always be in the loop, no matter where they are.

This E-News Portal will not only increase the convenience of accessing this important, but will increase this college community's connection with each other.

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