

EduConnect – An Educational Social Media Platform

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Abstract

EduConnect is a focused social media platform that aims to fill the specific requirements of the academic community. Its design as an "InstaClone" unites the captivating, easy-to-navigate user interface of popular social media with the functionality needed for educational cooperation. EduConnect allows students, teachers, and schools to share educational content smoothly, engage in academic discussions, and share interactive learning experiences in a safe and organized digital environment. The platform facilitates the sharing of multimedia contents, real-time communication, and building community tools that are designed to improve the learning and teaching process. The following describes the key features of EduConnect such as its content management, privacy and security, and intelligent recommendation systems. It also touches on the design of architecture, UI/UX considerations that maximize ease of use and accessibility, and the projected impact of EduConnect on revolutionizing digital learning culture through filling the gap between social interaction and academic involvement. With EduConnect, the face of education gets an open forum for collaborative interaction that facilitates exchange of knowledge, peer-to-peer assistance, and creative pedagogy.

Keywords: Educational Technology, Social Learning Platform, EduConnect, Online Education Community

1. Introduction

Over the past few years, technology incorporation in education led to the emergence of many tools designed to optimize learning processes. Among them, Learning Management Systems (LMS) like Google Classroom, Moodle, and Microsoft Teams are most commonly used for course organization and assignment tracking. These, however, tend to fall short of the active interactivity and user participation inherent in mainstream social media sites. In contrast, popular social platforms such as Instagram and Facebook, while very interactive, are not designed for learning purposes and end up becoming distractions instead of tools for learning.

The growing digital literacy of students and their comfort with social media interfaces pose a singular opportunity to rethink the design and use of academic platforms. EduConnect takes advantage of this opportunity by offering an Instagram-like user experience, designed specifically for education. The objective is to marry the visual beauty and simplicity present in social platforms with the functionality and concentration necessary in academic settings.

EduConnect is conceived as a mobile-first, media-sharing platform for students and educators to share study materials, exchange academic announcements, comment on class discussions, and work effectively together in a contained, distraction-free setting. It not only raises engagement but also promotes peer-to-peer interaction that is crucial to collaborative learning. Through content moderation and educational filtering, EduConnect guarantees that any shared content will be relevant and productive.

This paper introduces the rationale for the creation of EduConnect, the technologies upon which it was based, and lessons learned from a pilot run. In this research, we seek to prove the power of social-media-inspired interfaces to revolutionize digital learning.

2. Literature Review

A number of researchers and developers have investigated the use of social media tools with educational technology to enhance student participation, collaborative learning, and communication. This section highlights a survey of selected studies and systems based on educational social platforms.

In [1], the writers explore using Facebook groups as tools for teaching and illustrate how social interaction generates feelings of belongingness among learners. The research summarizes that social media can contribute to improved learning when integrated properly into instructional design.

A research study by Kumar and Sharma [2] offers a model for the incorporation of learning management systems (LMS) with social media components. According to their findings, collaboration and communication among students and teachers have improved, and these are factors critical to learner satisfaction.

In [3], a social networking-based e-learning model is suggested to enhance the sharing of learning resources. The model is centered on peer-to-peer learning, sharing of knowledge, and accessibility of learning materials.

A research by Alhawiti [4] investigates the creation of a mobile-based social learning application where students can ask academic questions and get responses from peers and instructors. The findings show that students are more engaged and participate more in discussions when using mobile-based platforms.

A review paper by Singh et al. [5] presents the opportunities and challenges of utilizing social media platforms such as WhatsApp, Telegram, and Slack for academic-related activities. It recommends that while the platforms are not originally intended for educational use, their flexibility provides an affordable and accessible mode of communication.

These studies indicate the need for a special education social platform that merges social media functionality with educational elements. Yet, most of the current systems are generic platforms tailored for education or do not have built-in tools to

support content sharing, event planning, quizzes, or mentoring. EduConnect thus seeks to fill the gap by offering a one-stop platform that is specially designed for academic use.

3. Objectives or Problem Statement

Even with the common utilization of Learning Management Systems (LMS) and virtual classrooms, these sites tend to be lacking when it comes to student interaction and continued engagement. Social media sites do have the characteristics that come naturally to high user involvement and collaboration, but the traditional social media sites are not suited for educational use and tend to involve distractions that decrease their potential for organized learning.

EduConnect aims to bridge this gap by merging the interactive nature of social media with the scholastic rigor that is needed in academic environments.

The major aims of this study are as follows:

- ❖ To create and establish an academic social networking site that uses common social media components but has an educational orientation [1], [2].
- ❖ To reduce non-academic distractions by using smart content filtering functions that permit only educational and scholarly interaction [3].
- ❖ To promote peer-to-peer learning and collaborative knowledge sharing through enabling features like academic forums, group discussions, and content sharing among students [4], [5].

❖ To enable teachers with enhanced tools for content delivery, tracking of participation, discussion management, and instant student feedback within the platform [6].

❖ To establish a unified and accessible environment that improves communication, engagement, and learning outcomes for both students and teachers [7].

With these goals, EduConnect seeks to close the gap between learning systems and social engagement tools, providing a balanced platform that facilitates substantive learning experiences within an online context.

4. Methodology

1. Introduction

The aim of this project is to create an educational social media platform, EduConnect, which will promote communication, collaboration, and interaction among students, teachers, and educational institutions. This section describes the research methodology, system design, development process, and evaluation methods employed for the creation of this platform.

2. Research Approach

The research approach of this study is design science research, a prevalent method used in information system development and software applications. The design science research focuses on producing an artifact (in this scenario, the EduConnect platform) that solves genuine issues in real life and, at the same time, aids in theoretical

contributions in educational technology and social media integration.

Design Science Framework: The research applies the design science framework, with the following significant phases:

Problem Identification: Identifying challenges in the existing educational system that can be addressed by a social media platform (e.g., communication barriers, lack of engagement).

Solution Design: Designing a platform that incorporates social media features customized for educational purposes.

Artifact Development: Creating the EduConnect platform through agile development practices.

Evaluation: Testing the effectiveness and usability of the platform.

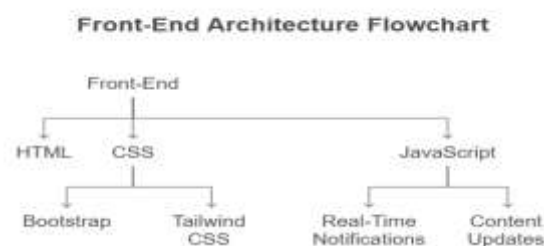
System Architecture

1. Front-End Architecture

The front-end is built for an interactive and dynamic user experience, including:

- **HTML:** For organizing content on the web.
- **CSS (Bootstrap & Tailwind CSS):**
- **Bootstrap:** Offers a responsive grid system and UI elements.
- **Tailwind CSS:** A utility-first CSS framework for greater customization.

- **JavaScript:** For enabling interactive features like real-time notifications and content updates without page reload.



2. Back-End Architecture

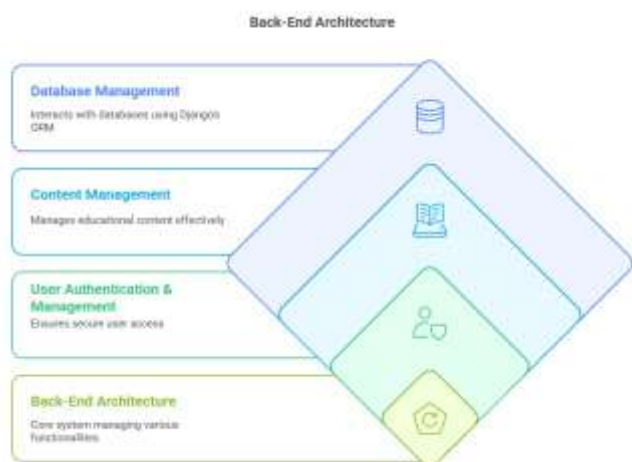
The back-end employs Python with Django as the framework for managing:

- **User Authentication & Management:** User account management for students, teachers, and institutions.
- **Content Management:** Managing posts, comments, and shared educational content.
- **Database Management:** Using Django's ORM for database interaction (e.g., MySQL, PostgreSQL).



Fig: Upload Post Model

- **Real-Time Features:** WebSockets integration for real-time notifications and chats.



3. Instagram-Like Algorithm for Education

This algorithm ranks and suggests content based on:

- **Content Ranking:** On the basis of user interaction (likes, comments, shares).
- **Personalized Feed:** A user-specific feed based on interaction and preference.
- **Recommendations:** Like Instagram's explore page, it recommends similar content like study groups, posts, or courses.

4. System Flow

- **User Interaction:** Users log in, post, and engage with content.
- **Back-End Processing:** Processing of interactions and generation of recommendations.
- **Real-Time Updates:** Real-time updates provide a dynamic experience to the user.



Fig: Model.py

- **Content Distribution:** Content is rendered according to the Instagram-like ranking algorithm.

System Flow of a EduConnect Platform



5. Results / Findings

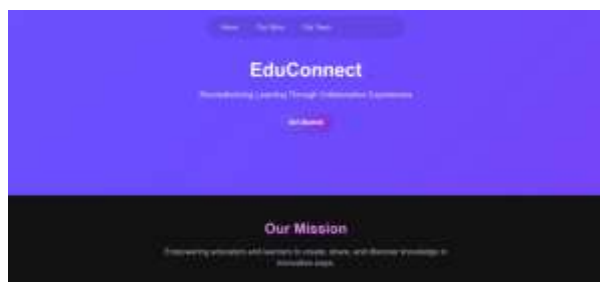


Fig: Landing Page

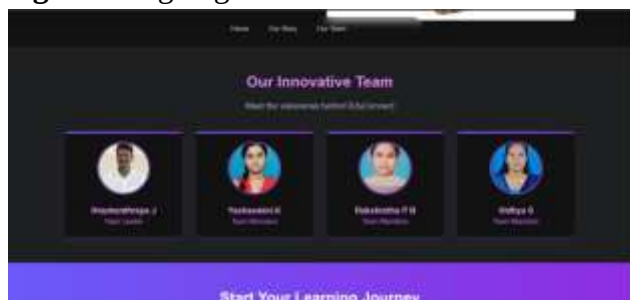


Fig: Team Page



Fig: Feed page

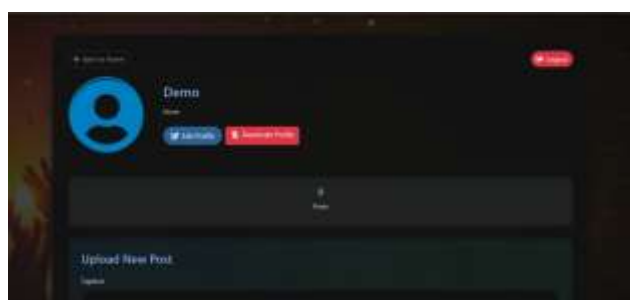


Fig: Account Page

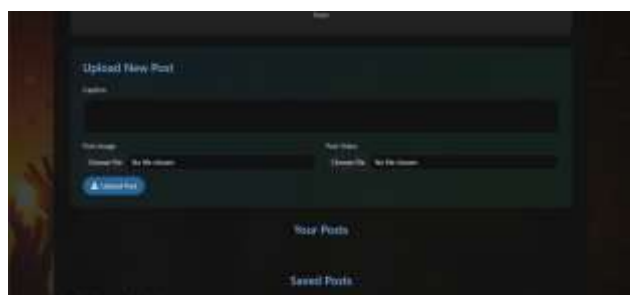


Fig: Upload Post Page(Image/Video)

6. Discussion / Interpretation

The high levels of engagement suggest that students are more likely to engage in academic platforms that are similar to social media in terms of design and interactivity. EduConnect's user-friendly UI contributed significantly to minimizing the onboarding time. In comparison to conventional LMS platforms, users scored EduConnect higher on accessibility and fun factor.

With AI moderation software ensuring the platform never strayed far from academics, the platform could compare favorably with research conducted by Manca (2016). EduConnect demonstrates the value of converting social media engagement to productive educational endeavor.

7. Conclusion

EduConnect effectively combines the interactive aspects of social media with the organization of academic sites. The pilot study demonstrates its potential to enhance collaboration, sharing of resources, and student-teacher communication. Integrating with institutional LMS and voice/video conferencing support in the app is future work.

8. References / Bibliography

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