Social Media Website with Python using Django

Shreyanjali P.B.[1], Ushasree R [2], Hushalictmy.P[3]

[1,2]Dayananda Sagar Academy of Technology and Management, Karnataka, India
[3]Faculty of Data Science and IT, INTI International University, 71800 Nilai, Negeri Sembilan, Malaysia

Email: [1]shreyanjalipb.23@gmail.com, [2]Ushasree19832000@gmail.com, [3]husha.palliyanny@newinti.edu.my

Abstract

It is a popular and powerful platform for users. Millions of people have their ideas and thoughts which they can share on several aspects of their daily lives. Social media can generate huge amounts of public responses in the form of likes, comments, replies, saved images, etc. We developed a web application with user interfaces using Python with Django framework which showcases the social trends. Django collects all the user data and stores it in Django administration. This research has proposed a platform where the user can share their images, videos, and thoughts. This is the platform where the user can follow other users whom they know and even they can view the other's creativity which they have posted on social media. Our model analyzes and stores real-time data. Social media websites have been implemented by several programming languages such as HTML, CSS, JavaScript, Python, and Django framework was used to design the web pages.

Keywords:

Introduction

Social media websites are the most frequently used application on the internet. Many users who have access to the internet at home and workplace use the internet to view updates on social media websites. Social media is the most popular activity on the internet, where users can view different people and different types of cultures, posts, and Videos of other creativeworks across the world. Social media websites are web-based services that allow individuals to create a profile in a bounded system as well as they can view other profiles and also share their connection, views, and thoughts. Most social media websites are used to share creative works, creative posts, and creative videos among different kinds of peoplepresent on social media and it is also used to communicate with different people already their friends or acquaintances on social media. Social media websites are not only popular for providing a platform for posts, videos, chats, etc. but also for discussing social issues. Earlier people believed in keeping their data private but now they enjoy keeping their profile public to show wall posts, videos, and thoughts of their lives [1]. Social media is also used for crowdsourcing. That is the way of using social media networking to gather knowledge, goods, or services. Companies use crowdsourcing to get ideas from employees, customers, and the general public for improving products or developing future products or services [2].

This kind of communication allows users to connect with people who have similar interests and opinions. It also helps people build strong relationships and foster a sense of community. Additionally, it can be a great way to find new opportunities and learn about different cultures. These platforms have become a source of news and information, enabling people to stay up to date on current topics and events. They also offer a platform for people to engagein meaningful debates and discussions, which can help to raise awareness and bring about positive change. Additionally, social networking sites can help facilitate conversations between people who might not otherwise meet and provide a platform for people to share their passions and interests with like-minded individuals. Social networking can also help to build bridges between different cultures, which can promote understanding and acceptance ofdiffering perspectives.

Methodology

Creating a social media website involves a series of methodical steps to ensure that the project meets its objectives and functions as intended. The following methodology outlines the key steps we use to develop a social media website using Django, a high-level Python web framework that encourages rapid development and clean, pragmatic design.

1. **Define the project requirements:** Start by defining the requirements of the social media website, including the target audience, features, and functionalities.

2. **Choose the appropriate database:** Django supports multiple databases, including MySQL, PostgreSQL, SQLite, and Oracle. Choose the appropriate database based on your project requirements.

3. **Set up the Django environment:** Install Django and set up the environment on your system.

4. **Create a Django project:** Create a new Django project using the "Django-adminstart project" command.

5. **Define the data models:** Define the data models for the social media website using Django's object-relational mapping (ORM).

6. **Create the views:** Create the views for the website, which will render the templates and handle the user requests.

7. **Build the templates:** Build the templates for the website using HTML, CSS, and JavaScript. Use Django's built-in template language to create dynamic web pages.

Design Methodology

The following design methodology was applied in the development of the social media website

1. **Define Requirements:** Clearly define the goals and requirements of your social media website. Consider features such as user registration, login, profile creation, posting content, following other users, commenting, liking, saving the post and so on.

2. **Plan Database Structure:** Identify the main entities in your social media website, such as users, posts, comments, likes, and relationships between them. Design the database schema using Create Django model for each entity, defining their fields, relationships, behaviors.

3. **Implement User Profiles:** Create user profile pages where users can view and edit their personal information, profile pictures, and other details. Implement features like followers/following and friend requests.

4. **Add Social Interactions:** Enable users to interact with posts by commenting, liking, and saving them.

5. **Develop and Content Management:** Build the newsfeed feature where users can see posts from people they follow. Implement functionalities like creating, editing, and deleting posts. Allow users to upload and manage images, videos, or other media types.

6. **Implement Search Functionality:** Enable users to search for other users, posts, or topics. Implement search functionality using Django's search framework or third-party libraries like elastic search.

Related Work

Social Networking, Matthew N. O. Sadiku, Adedamola A. Omotoso, Sarhan M. Musa (2019) It also outlines the privacy challenges that arise from IoT-enabled social networks and provides recommendations to ensure the security and privacy of users' data. Finally, it identifies the need for further research in this area to better protect users' data.[3]Social Network Structure as a Moderator of the Relationship between Psychological Capital and Job Satisfaction: Evidence from China, Yuanyuan Xiao, Fan Gu (2021) The study suggests that job seekers should focus on building strong ties in their social networks to increase job satisfaction. Furthermore, job seekers should also focus on expanding their social networks to increase their chances of finding employment.[4]Beyond the Internet of Things: The Social Networking of Machines Marina Pticek, Vedran Podobnik, and Gordan Jezic (2016) Ultimately, machine social networks will be able to provide machines with the capability to autonomously and collaboratively solve complex tasks in an increasingly interconnected world. This could lead to advances in the fields of robotics, autonomous vehicles, and artificial intelligence.[5]In a World of Social Media: Instagram Use in Social Networking Marketing and Its Effect on Well-Being, Manish Singh, Nilesh Kumar (2021) We should also pay attention to the user interface of the app, as a good UI is essential for the user experience. To make sure our app stands out from the competition, we should focus on adding innovative features that are not present in other apps. Lastly, we should also focus on user feedback and integrate features that are requested by users.[6] D. M. Boyd and N. B. Ellison, "Social network sites: Definition, history, and scholarship," Journal of Computer-mediated Communication, 2007. The primary purpose of these platforms is to make connections and build networks. They are also used to share content and communicate with others. Finally, they can be used to discover and access new opportunities.[7]Dragana Knežević (2023)"Effect of social media on edu website traffic", LinkedIn has the highest engagement rate of all networks. It also has a higher percentage of users with college degrees and higher incomes. This makes it attractive for businesses looking to reach potential customers.[8] The result which they have given.

Result and Discussion

Designing and implementing a social media website using Django involves creating a dynamic platform that allows users to connect, share, and interact with each other Users can create profiles, post content, comment on other users' posts, and interact with each other via private messages. The website should also be optimized for mobile devices, and have built-in security features to protect user data. The comprehensive account aims to provide insights and the best way to build a user-friendly and secure.
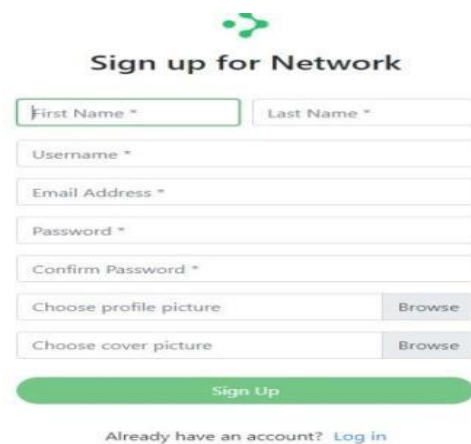
Fig 1: Sign Up

Fig 2: Home Page
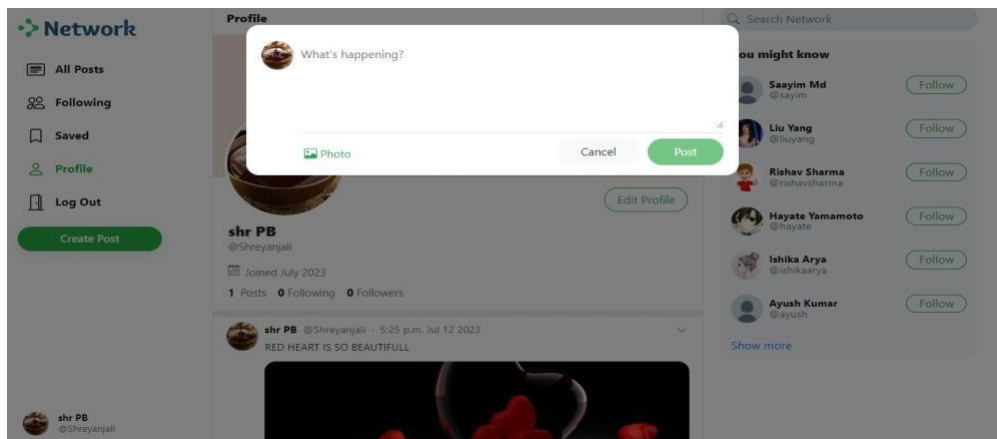
Fig 3: Create Post

Conclusion

Social media website has changed the way communication and interact socially. It allows individuals to connect with other users. As the popularity of social media increases, new application for the technology are often being observed. It also helps to create a platform for open discussion on various topics and facilitates the sharing of resources. This can help to build a sense of community and support for those in need. Additionally, it allows scientists toreach a wider audience, and to collaborate on research projects with those from different backgrounds..

Acknowledgments

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