

Social Media Systems – A General Approach

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Abstract

The future of Social Media Marketing is astonishing as Social media applications such as LinkedIn, Facebook, Instagram, Snapchat, and Twitter, are top examples of sophisticated applications. Some of the most popular characteristics of nearly all social media apps are - User authentication, Notification and newsfeed, Easy integration with other platforms, Posting, sharing, and commenting. A social media application gives you abundant scope for experimentation. After adding the most basic features (as the ones mentioned above), we can create an extra attribute for customization that will allow end-users to tweak their profiles and accounts according to their requirements and preferences.

Keywords— Social Media, MERN Stack, Web Application

I. INTRODUCTION

Social media has affected how people communicate, form relations, and build trust in home and work environments. It started as a set of tools for friends and to stay connected has evolved into a means for businesses to communicate. We also know that social media channels are useful in a different way, we focus on the emerging trend of its application to support project management. Handling relationships to build trust is exceptionally important for project managers because it is becoming more common for project team members to be distributed. This absence of physical contact makes it more difficult to establish strong relationships and bonds that lead to high levels of trust, making the communication process more challenging. Conversations delivered through social media are likely a valuable resource for strengthening trust between project team members. The following sections review research associated with social networks and social media and project management information systems that include social media.

II. LITERATURE REVIEW

Social media is transforming consumer management and business communication patterns. The growth of social media platforms has been well documented, a survey by McKinsey conducted in 2009 of 1700 executives globally revealed that about 64% of these companies were using social media for effective internal communications.

Similarly, the research of executives conducted by Barnes and Mattson. They found that almost 52% of the total reported using social media as effective tools in their companies. When asked if their company uses social media “to communicate with other companies like vendors, suppliers or partners,” they found that “social networking is the most widely used with 34% describing they employed these tools” (Barnes & Mattson, 2009).

The reasons for the accomplishment of online social networks can be found in the work of researchers who studied offline communities of work and social networks. Etienne Wenger was one of the pioneers in studying the value that these communities bring to organizations via the strong relationships and social ties that build active connections and the transfer of knowledge. His study recommends that the power of these communities lies in their capability to develop strong connections and trust, a requirement for effective communications.

III. PROBLEM FORMATION

Create a social media platform using the minimum features possible that can be expanded easily for making more complicated social media platforms.

IV. TOOLS AND TECHNOLOGIES

- a) Create React App or React Native for creating dynamic UI for posts, messages, and likes.
- b) AWS Amplify, or Firebase, or Hasura (using GraphQL subscriptions) for real-time data.
- c) AWS Lambda or Firebase Functions for app notifications
- d) Firebase or Cloudinary storage for uploading pictures and videos.
- e) NPM for other dependencies.

V. MERITS OF PROPOSED SYSTEM

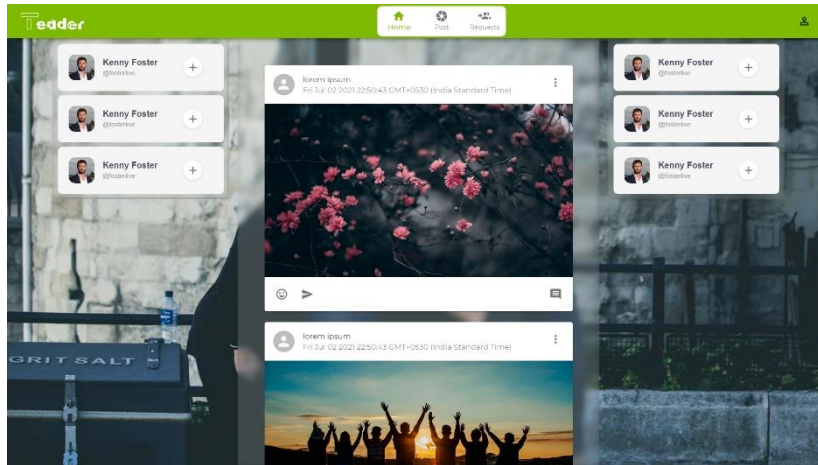
- a) Have all minimum features needed to work.
- b) Can be easily expanded to add more features
- c) Uses GraphQL API for easy data fetching.

VI. IMPLEMENTATION AND DESCRIPTION OF PROJECT MODULES

A. Module 1 –

1) Designing the Front-end –

- a) Using Google’s Material UI design techniques and component’s we’ll first wireframe the UI, and
1) Then implement the same with React.js.



B. Module 2 –

1) Designing the Backend and Database API –

- a) Based on the features we’ve chosen, first, we’ll implement the basic database and create all the CRUD APIs using GraphQL.
- b) Next, we’ll set up our backed using Node.js
- c) Then, we’ll connect our front-end and back-end services.
- d) Finally, we’ll deploy our app.

C. Technologies

1) Node.js -

1) Node.js is an asynchronous event-driven JavaScript runtime designed to build scalable network applications. Thread-based networking is relatively inefficient and very difficult to use. Node.js is free from worries of dead-locking the process since there are no locks. Almost no function in Node.js directly performs I/O, so the process never blocks. Because nothing blocks, scalable systems are very reasonable to develop in Node.js.

2) NPM – NPM (Node Package Manager) is the world's largest software registry. It can be used to use many popular packages built for Node.js like React, Express, Mongoose, etc.

3) Express.js – It’s a fast, un-opinionated, minimalist web framework for Node.js. It’s used to create web-servers, API’s and Framework

4) REST -

Representational state transfer (REST) is a software architecture for interactive applications for Web services.

HTTP method	Description
GET	Get a representation of the target resource’s state.
POST	Let the target resource process the representation enclosed in the request.

PUT	Set the target resource's state to the state defined by the representation enclosed in the request.
DELETE	Delete the target resource's state.

5) MongoDB-

- 1) The document-based no-SQL database for modern applications
- 2) MongoDB is a general-purpose, document-based, distributed database built for modern application developers and the cloud era.
- 3) MongoDB is a document database, which means it stores data in JSON-like documents. We believe this is the most natural way to think about data and is much more expressive and powerful than the traditional row/column model.

6) MongoDB Atlas -

- 1) The global cloud database
- 2) MongoDB Atlas is the multi-cloud database service for MongoDB available on AWS, Google Cloud, and Azure. Best-in-class automation and built-in proven practices provide continuous availability, elastic scalability, and support with regulatory compliance.

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