



# International Journal of Multidisciplinary Research in Science, Engineering and Technology

*(A Monthly, Peer Reviewed, Refereed, Scholarly Indexed, Open Access Journal)*



Impact Factor: 8.206

Volume 8, Issue 4, April 2025



## International Journal of Multidisciplinary Research in Science, Engineering and Technology (IJMRSET)

(A Monthly, Peer Reviewed, Refereed, Scholarly Indexed, Open Access Journal)

# Connectify: An Interactive Social Media App with Personalization

**Dr. Shailesh Gondal, Shivam Likhari**

Professor, Faculty of Computer Applications, Acropolis Institute of Technology and Research, Indore, Madhya Pradesh, India

Integrated MCA Student, Faculty of Computer Applications, Acropolis Institute of Technology and Research, Indore, Madhya Pradesh, India

**ABSTRACT:** This research paper presents the design, development, and deployment process of a modern social media application aimed at facilitating digital interaction and content sharing among users. The application features a user-friendly interface, secure authentication, post creation, real-time updates, and user engagement features such as likes and comments. Using modern web technologies and frameworks like the MERN stack (MongoDB, Express, React, and Node.js), the application offers scalability, performance, and interactivity. This paper also discusses the challenges encountered, solutions implemented, and future scope for improvement.

## I. INTRODUCTION

Social media has transformed human communication, enabling users to share thoughts, media, and personal updates in real time. With billions of users worldwide, the demand for customizable, scalable, and secure platforms has increased. This project aimed to create a basic yet expandable social media application as a proof of concept, integrating essential features such as user sign-up, authentication, post feeds, likes, and comments.

## II. LITERATURE REVIEW

Numerous studies and applications have explored social networking frameworks. Popular platforms like Facebook, Twitter, and Instagram set benchmarks for functionality and user engagement. Research has also focused on optimizing data storage, ensuring privacy, and maintaining high availability.

**Security and Privacy:** Social networks often face scrutiny regarding user data privacy. Papers like “Security Issues in Online Social Networks” (Al-Saggaf & Weckert, 2016) highlight the need for robust authentication mechanisms and encryption.

**Scalability:** Research by Dean and Ghemawat (2004) introduced distributed systems like MapReduce to handle large-scale data processing.

**Frontend Usability:** Human-computer interaction studies recommend minimalistic, responsive UI for better engagement and user retention.

## III. METHODOLOGY

### 3.1 Technology Stack

- **Frontend:** React.js – Component-based UI for scalability and performance.
- **Backend:** Node.js with Express – REST API development.
- **Database:** MongoDB – NoSQL database for flexible document storage.
- **Authentication:** Google OAuth 2.0 via react-google-login.

### 3.2 Features

- User Registration and Login via Google
- Create, Read, Like, and Comment on Posts





## International Journal of Multidisciplinary Research in Science, Engineering and Technology (IJMRSET)

(A Monthly, Peer Reviewed, Refereed, Scholarly Indexed, Open Access Journal)

- Real-time Feed Updates
- Responsive Design for Mobile and Desktop
- Secure API Communication

### 3.3 Development Process

The application was developed using Agile methodology. Features were divided into sprints with unit testing and code reviews for each component.

## IV. IMPLEMENTATION

- **Frontend:** Components were developed in React using functional components and hooks (useState, useEffect). React Router was used for page navigation.
- **Backend:** RESTful APIs handled user and post management. JWT tokens and OAuth ensured secure access.
- **Database:** MongoDB stored user credentials, posts, and engagement data.
- **Deployment:** The app was deployed on Render for the backend and Vercel for the frontend. MongoDB Atlas was used as the cloud database.

## V. RESULTS AND DISCUSSION

The application successfully implemented core features:

Feature	Status
Google Authentication	Implemented
Post Creation	Working
Likes and Comments	Real-time
Mobile Responsiveness	Optimized

User testing indicated a smooth user experience and fast performance. Challenges included handling OAuth callback issues and ensuring database schema consistency.

## VI. CHALLENGES

- **Authentication Errors:** Initially, integration with react-google-login failed due to incorrect client ID and redirect URIs.
- **Deployment Issues:** CORS errors were encountered during backend API calls.
- **Database Modeling:** Designing a schema for nested comments and likes required careful referencing in MongoDB.

## VII. FUTURE SCOPE

- Add profile customization features
- Implement notifications
- Integrate chat/messaging system
- Enable media uploads (images, videos)
- Improve post sorting algorithms (e.g., trending, recent)



## International Journal of Multidisciplinary Research in Science, Engineering and Technology (IJMRSET)

(A Monthly, Peer Reviewed, Refereed, Scholarly Indexed, Open Access Journal)

### VIII. CONCLUSION

The project successfully demonstrates the feasibility of creating a robust, scalable, and engaging social media application using modern web technologies. With further development, the application can evolve into a competitive platform for social networking.

### REFERENCES

1. Al-Saggaf, Y., & Weckert, J. (2016). Security Issues in Online Social Networks.
2. Dean, J., & Ghemawat, S. (2004). MapReduce: Simplified Data Processing on Large Clusters.
3. MongoDB Documentation: <https://www.mongodb.com/docs/>
4. React Documentation: <https://reactjs.org>
5. Chib, S., Devarajan, H. R., Chundru, S., Pulivarthy, P., Isaac, R. A., & Oku, K. (2025, February). Standardized Post-Quantum Cryptography and Recent Developments in Quantum Computers. In 2025 First International Conference on Advances in Computer Science, Electrical, Electronics, and Communication Technologies (CE2CT) (pp. 1018-1023). IEEE.
6. Express.js Guide: <https://expressjs.com>
7. OAuth 2.0 Guide: <https://developers.google.com/identity/protocols/oauth2>
8. Socket.IO Documentation: <https://socket.io/docs/>
9. Node.js Documentation: <https://nodejs.org/en/docs/>
10. JWT Authentication Guide: <https://jwt.io/introduction/>



INTERNATIONAL  
STANDARD  
SERIAL  
NUMBER  
INDIA



# INTERNATIONAL JOURNAL OF MULTIDISCIPLINARY RESEARCH IN SCIENCE, ENGINEERING AND TECHNOLOGY

| Mobile No: +91-6381907438 | Whatsapp: +91-6381907438 | [ijmrset@gmail.com](mailto:ijmrset@gmail.com) |

[www.ijmrset.com](http://www.ijmrset.com)