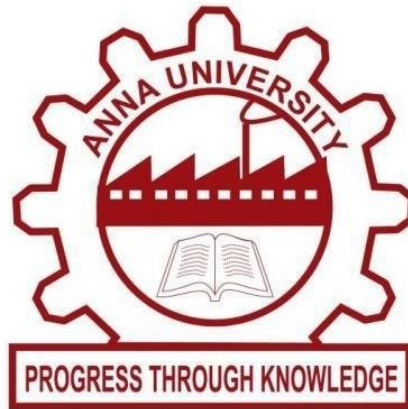


**MADRAS INSTITUTE OF TECHNOLOGY  
ANNA UNIVERSITY  
CHENNAI – 600 044.**



**DEPARTMENT OF INFORMATION TECHNOLOGY  
PROJECT REPORT  
SUMMER INTENSHP  
IT5513**

**Project Title: Connect++ (Social Connecting Platform)**

**Team Members:**

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**Sanjay B 2022506124**

**Kabilesh Selvakumar E 2022506078**

## **Introduction:**

Connect++ is a dynamic and feature-rich social media platform developed using the MERN (MongoDB, Express.js, React.js, Node.js) stack. The platform aims to foster a collaborative environment specifically designed for tech enthusiasts, merging the best aspects of professional networking and technical knowledge sharing.

## **Objectives:**

- Foster Collaboration Among Tech Enthusiasts
- Create a platform that brings together individuals with shared interests in technology to share ideas, experiences, and solutions.
- Provide users with intuitive tools, such as speech-to-text functionality and share their thoughts and content
- Enhance User Interaction and Engagement
- Incorporate features like private messaging
- Offer an environment similar to technical forums, enabling users to ask questions, provide answers, and learn from peers.
- Provide a User-Friendly Interface
- Encourage Professional Networking
- Blend professional networking features inspired by platforms like LinkedIn with technical problem-solving features from Stack Overflow, catering to tech-savvy users.
- Offer Future Scalability and Flexibility

## **Tech Stack :**

### **Frontend**

- **React.js:**
  - For building an interactive and dynamic user interface.
- **Material-UI:**
  - For modern and responsive UI components.
- **CSS:**
  - For styling the application and ensuring a polished user experience.

### **Backend**

1. **Node.js:**
  - For server-side logic and handling API requests.
2. **Express.js:**
  - To create and manage RESTful APIs efficiently.

### **Database**

1. **MongoDB:**
  - A NoSQL database for storing user data, posts, and other app content.

### **Deployment and Environment**

1. **Localhost:**
  - Development and testing environment.
2. **Mongoose:**
  - To connect and interact with MongoDB in a Node.js environment.

### **Additional Tools and Features**

1. **Speech Recognition API:**
  - For speech-to-text functionality during post creation.
2. **Otp Verification**
  - Used Email.js for live otp verification on login.

## Features

### 1. User Authentication and Authorization

- Secure registration and login functionality using JWT.
- Session management to ensure only authorized users access their profiles.

### 2. Social Media Post Creation

- Create posts with text
- Rich-text content editing using Markdown support.
- Speech-to-text integration using the Web Speech API for effortless post writing.

### 3. Interactive User Engagement

- Users can like, comment on, and share posts.
- Following/unfollowing other users to create personalized feeds.

### 4. Real-time Updates

- Posts, likes, and comments update dynamically for a seamless user experience.

### 5. User Profiles

- Personalized profile pages showcasing user posts, profile pictures, and follower stats.

### 6. Responsive Design

- Optimized UI for desktop and mobile devices using Material-UI.

### 7. Error Handling and Alerts

- Integrated error alerts for input validation and API errors to guide users effectively.

### 8. Private Chat

Users can send and receive private messages to/from other users.

## System Design

### DB Design

#### User Collection:

Centralized management of user data allows secure authentication and enables personalized user experiences. Connected to the **Post**, **Comment**, collections to manage user activity and relationships.

#### 2. Post Collection

It supports dynamic content creation and sharing, forming the backbone of the Connect++ social feed. Linked to **User** for author identification. Connected to **Comment** and **PostLike** for community interactions.

#### 3. Comment Collection.

Facilitates meaningful discussions and feedback on user posts. Connected to **Post** for linking comments to the respective post. Linked to **User** for tracking comment authorship.

#### 4. PostLike Collection

It enables features like top-liked posts and user engagement metrics. Linked to **Post** for associating likes with specific content. Connected to **User** for tracking which users liked a post.

#### 5. Conversation Collection

It acts as a reference for associating messages with their respective conversations. Linked to **User** for identifying participants.

#### 6. Message Collection

Supports real-time communication functionality within the platform. Linked to **Conversation** to group messages. Connected to **User** for tracking message senders.

## Implementation Details:

### Frontend:

- Developed using React.js with Material-UI for an attractive and responsive user interface. Features include post creation, image uploads, commenting, messaging, and translation. State management is handled using Redux to manage global application state.

### Backend:

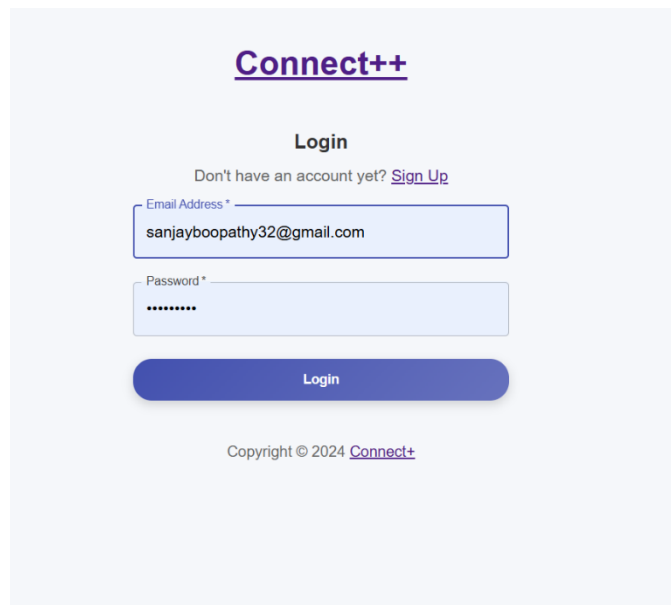
- Built with Node.js and Express.js to handle API requests, routing, and middleware. Authentication implemented using JWT for secure user sessions. WebSockets used for real-time messaging and notifications.

### Database:

- MongoDB is used for data storage, designed with collections such as User, Post, Comment, Conversation, and Message. Each collection is linked using references to ensure efficient data retrieval.

## Screenshots:

### Login Page:



The screenshot shows a login form for 'Connect++'. The form is centered on a light blue background. It includes a title 'Login', a link for users without an account, input fields for email and password, and a 'Login' button. The email field is pre-filled with 'sanjayboopathy32@gmail.com' and the password field shows masked characters. A copyright notice is at the bottom.

**Connect++**

**Login**

Don't have an account yet? [Sign Up](#)

Email Address \*  
sanjayboopathy32@gmail.com

Password \*  
\*\*\*\*\*

Login

Copyright © 2024 [Connect++](#)

### Signup Page:

## Connect++

### Sign Up

Already have an account? [Login](#)

Send OTP

Sign Up

Copyright © 2024 [Connect++](#)

## OTP Verification:

localhost:3000 says  
OTP verified successfully. You can now sign up.

OK

### Sign Up

Already have an account? [Login](#)

Enter OTP \*

265427

Verify OTP

localhost:3000 says  
OTP has been sent to your email.

OK

### Sign Up

Already have an account? [Login](#)


Send OTP

Sign Up

Verification form PostIt

Inbox

☆



SANJAY

9:22 pm

to me

😊

↩

⋮

Hello User,

Your Otp for the signup

265427

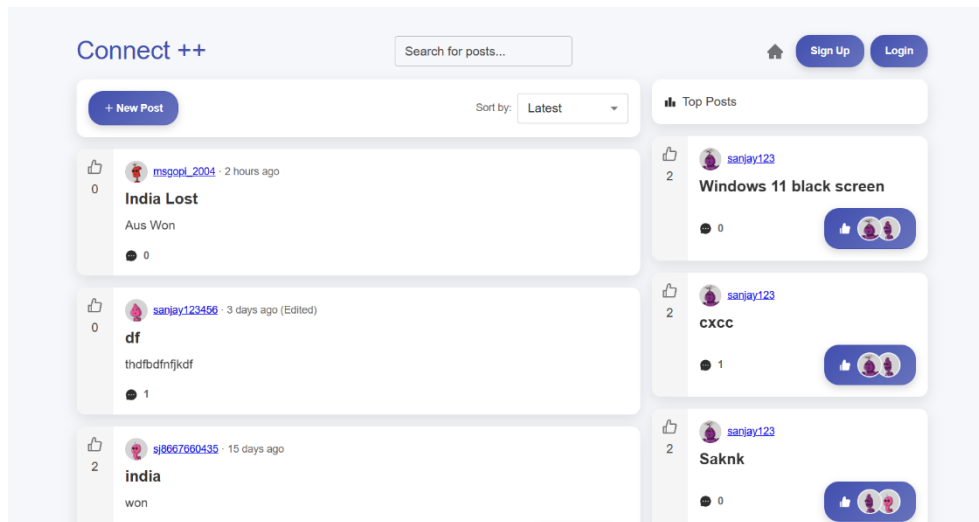
Best wishes,

PostIt Team

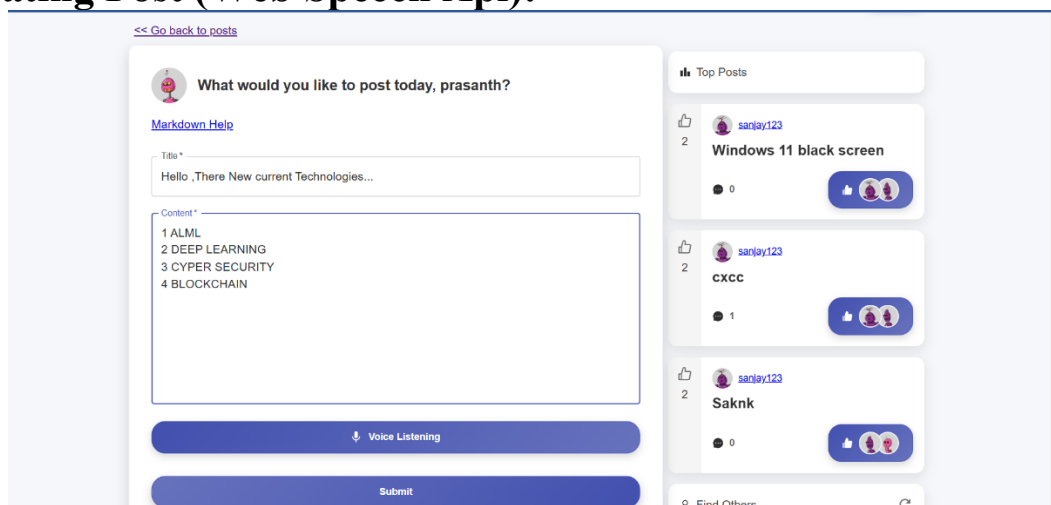
Contact: [sanjayboopathy32@gmail.com](mailto:sanjayboopathy32@gmail.com)

Email sent via [EmailJS.com](#)

## Home Page:

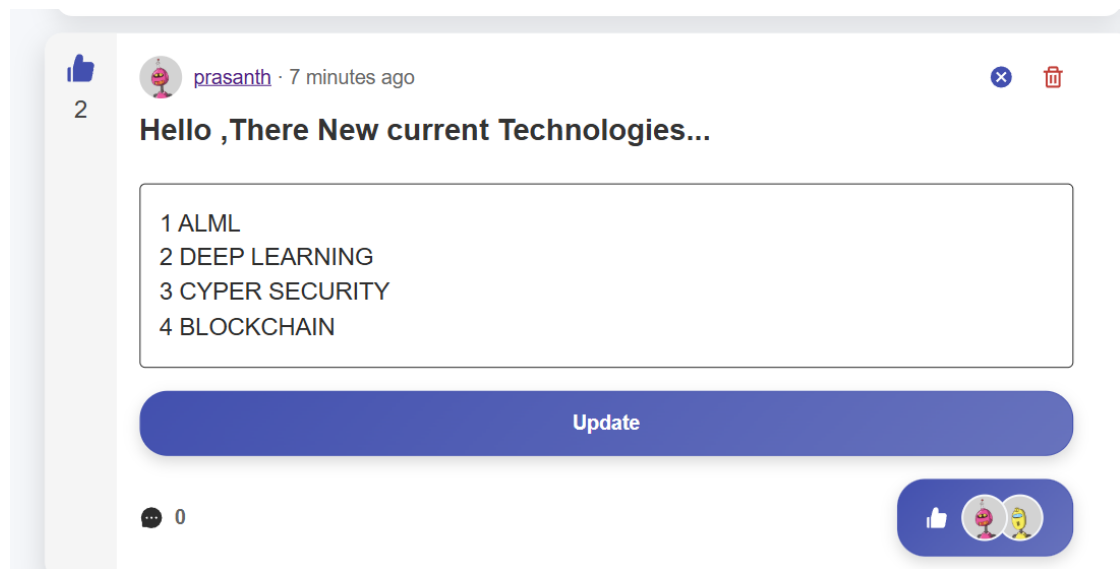


## Creating Post (Web Speech Api):

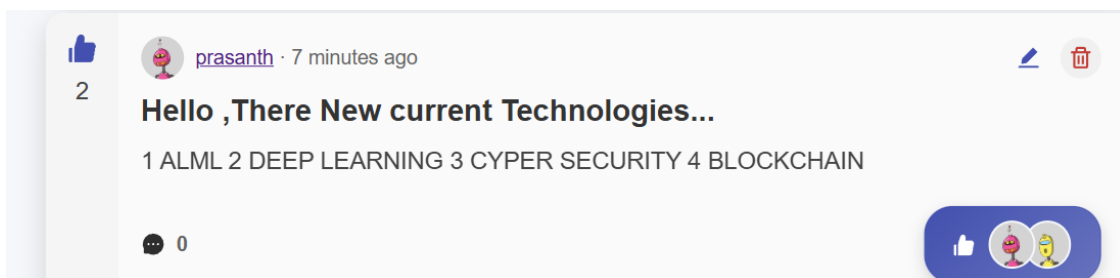


## Update Post:

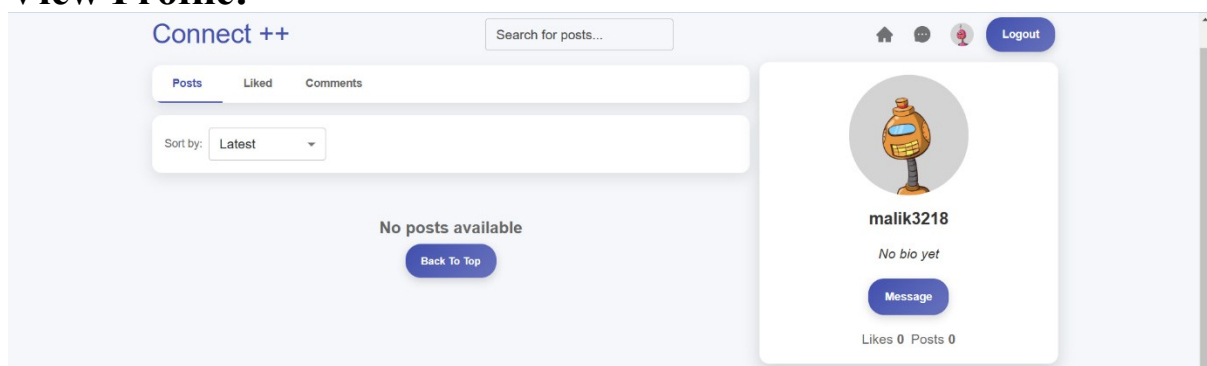




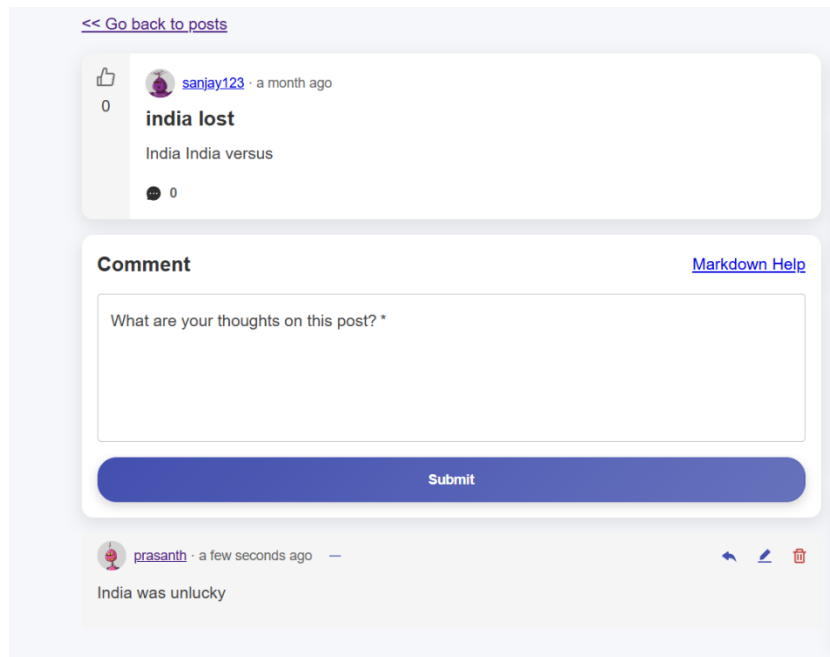
## View Post:(Edit/Delete)



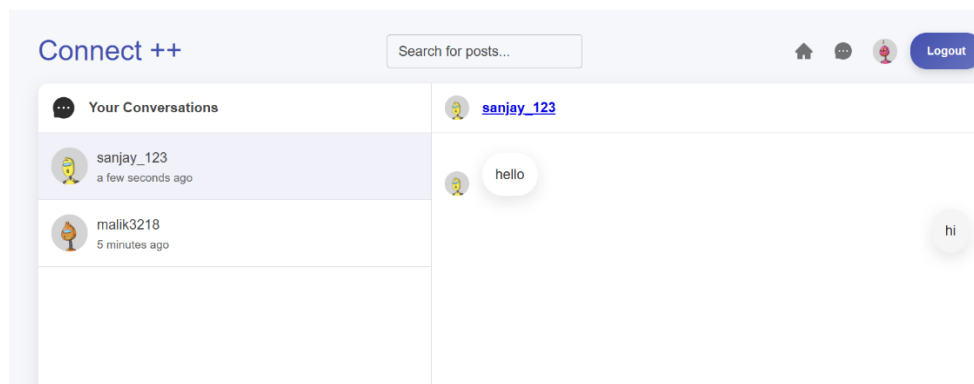
## View Profile:



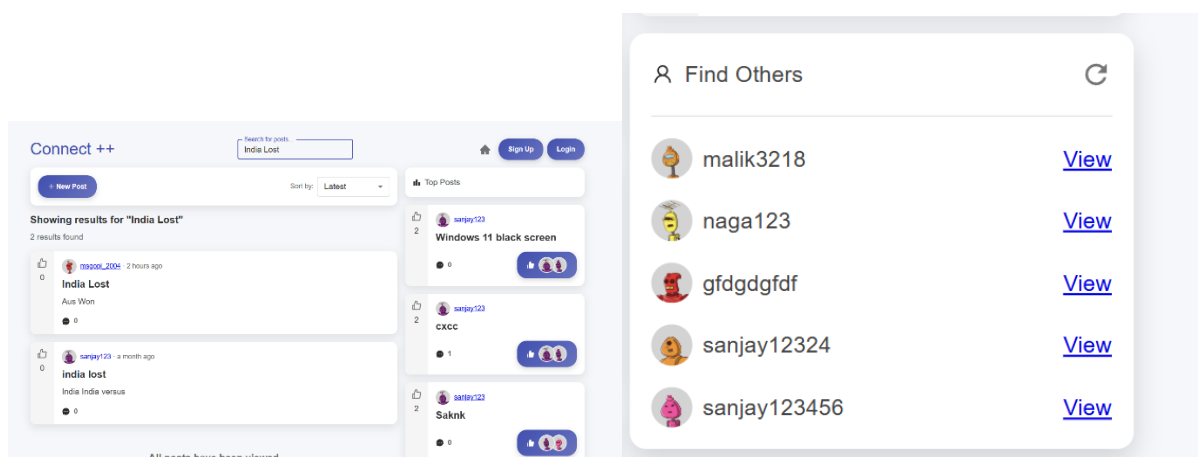
## Comment on Posts:



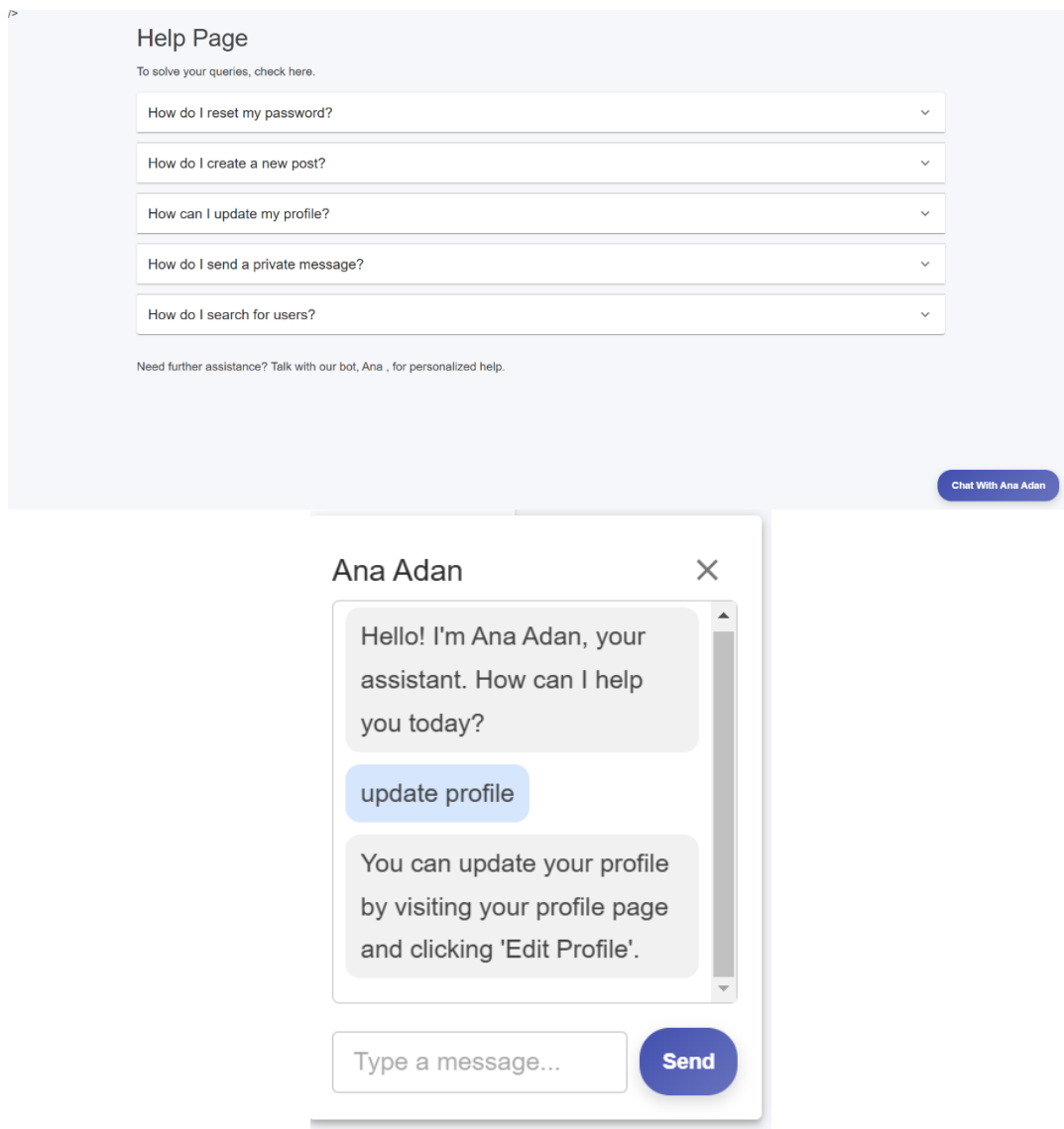
## Chat:



## Find Post and Users:



## Simple Help Page with Pre-Input Bot:



### Future Enhancements:

- **Mobile Application:** Develop mobile app versions for both Android and iOS to increase accessibility.
- **Advanced Search:** Implement filters for searching users and posts based on location, hashtags, and other attributes.
- **Analytics Dashboard:** Provide users and admins with insights such as post engagement, follower growth, and message trends.
- **Enhanced Security:** Add two-factor authentication (2FA) and advanced role-based access control.
- **Video Uploads:** Extend the post feature to support video uploads along with images.

## **Conclusion**

Connect++ successfully bridges the gap between professional networking and social media for tech enthusiasts. With features like real-time messaging, multilingual support, and a user-friendly interface, the platform fosters collaboration and knowledge sharing. The robust design ensures scalability, and the admin module provides comprehensive control over platform data. Moving forward, Connect++ will focus on expanding its features and optimizing the user experience to become a versatile social media platform for techies.