

ProConnect: A Secure and Scalable Professional Networking Platform for Students and Young Professionals

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Abstract— Professional networking plays an important role in career growth and knowledge sharing. Existing networking platforms are often complex for students and beginners. To solve this issue, ProConnect is developed as a simple and user-friendly professional networking web application for students and young professionals.

The platform allows users to create professional profiles, connect with others, create posts, and interact through likes and comments. Users can also search professionals based on skills and interests.

ProConnect is developed using React.js for frontend development, Spring Boot for backend services, and MySQL/PostgreSQL for database management. JWT authentication is used to ensure secure communication and data protection.

This research provides a secure, scalable, and efficient networking platform focused on professional growth and collaboration.

Index Terms— Professional Networking Platform, Full-Stack Web Development, Career Collaboration.

I. INTRODUCTION

In today's digital world, professional networking has become an important part of career development and communication. Students and young professionals need platforms where they can showcase their skills, connect with others, and explore career opportunities. Although many networking platforms are available, most of them are complex and not specifically designed for beginners.

To solve this problem, ProConnect is developed as a simple and user-friendly professional networking web application. The platform provides a structured environment where users can create professional

profiles, share posts, build connections, and interact with other professionals.

ProConnect focuses on professional growth, knowledge sharing, and collaboration rather than general social media interaction. The system includes features such as profile management, connection requests, post interaction, and professional search functionality.

The platform is developed using React.js for frontend development, Spring Boot for backend services, and MySQL/PostgreSQL for database management. It follows a client-server architecture and uses REST APIs for communication. Security is maintained using JWT authentication and encrypted password handling. The main objective of ProConnect is to provide a secure, scalable, and efficient networking platform that supports students and young professionals in building their professional identity and expanding career opportunities.

II. LITERATURE SURVEY

Professional networking platforms have become an important part of modern career development and online communication. Existing studies show that digital networking systems help users build professional identities, share knowledge, and connect with people having similar interests and skills. These platforms are widely used for improving communication, collaboration, and career opportunities.

Research on social networking applications explains that features such as profile creation, connection management, post interaction, and search functionality

improve user engagement and professional visibility. Interactive systems including likes, comments, and content sharing increase communication among users and create an active professional community. Studies on modern web applications highlight the importance of scalable and secure system architecture. Client-server architecture is commonly used because it separates frontend, backend, and database operations, improving performance and maintainability. REST APIs are widely adopted for smooth communication between different system components.

Security is another major aspect discussed in existing research. Authentication systems using JWT tokens and password encryption techniques are commonly implemented to protect user data and prevent unauthorized access. Secure APIs and encrypted credentials improve reliability and user trust in networking platforms.

Research also shows that responsive user interfaces and dynamic frontend technologies improve overall user experience. Modern frameworks such as React.js help in creating fast and interactive web applications, while backend frameworks like Spring Boot provide efficient business logic and database integration. Based on these studies, ProConnect is developed as a secure, scalable, and user-friendly professional networking platform focused on students and young professionals.

III. METHODOLOGY

ProConnect follows a client-server architecture consisting of frontend, backend, and database layers.

- Frontend: React.js
- Backend: Spring Boot
- Database: MySQL/PostgreSQL

The frontend provides the user interface, while the backend handles business logic and REST APIs. User data, posts, and connections are stored in the database. JWT authentication and password encryption are implemented for security. The system was tested for authentication, API communication, and database operations to ensure reliability and performance.

REST APIs are used to enable communication between frontend and backend systems efficiently.

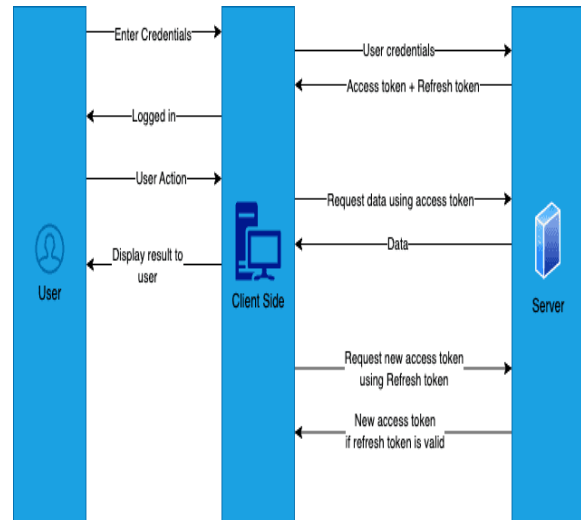
The system architecture ensures scalability, maintainability, and smooth user interaction.

IV. WORKING PRINCIPLE

The working process of ProConnect begins with user registration and profile creation. Users enter their professional details such as education, skills, and experience. The backend securely stores this information in the database and manages user authentication.

The platform allows users to create posts, send connection requests, and interact through likes and comments. Users can also search for professionals based on skills and interests to expand their professional network.

The frontend communicates with backend services through REST APIs. The backend processes requests, interacts with the database, and returns responses to the frontend for display. Authentication and encrypted passwords ensure secure access and protect user data from unauthorized activities.

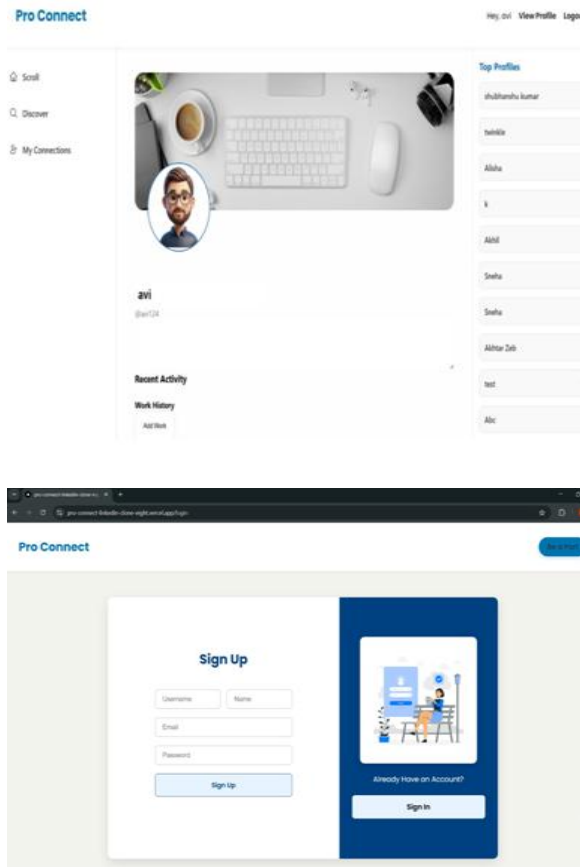


V. RESULT

The development of ProConnect successfully achieved its objective of creating a secure and user-friendly networking platform for students and young professionals.

The system successfully implemented:

- User authentication
- Profile management
- Post interaction
- Connection management



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VI. CONCLUSION

ProConnect successfully demonstrates a modern professional networking platform designed for students and beginners. The project combines React.js, Spring Boot, and MySQL/PostgreSQL to provide a secure, scalable, and efficient system.

The platform supports professional profile creation, networking, and interaction in a simplified environment. Future improvements such as AI-based recommendations, messaging systems, and mobile applications can further enhance the platform.

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