

CS4530 Final Project: StackOverflow+ Collaboration Hub

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Project Overview

Our goal was to build a platform where developers can talk, share ideas, and work together in real time. Instead of only posting questions and waiting, we wanted users to have faster and more interactive ways to connect. So we focused on three main features: **Real-Time Group Chats** where users can join rooms and chat instantly, **Custom Profiles** where each user can choose an avatar and see points and badges, and **Google Login** for one-click sign-in with Google for easier onboarding. We wanted the overall experience to feel simple, quick, and collaborative.

Tech Stack

Frontend: React, TypeScript, Chakra UI

Backend: Node.js, Express, WebSockets

Database: MongoDB / PostgreSQL

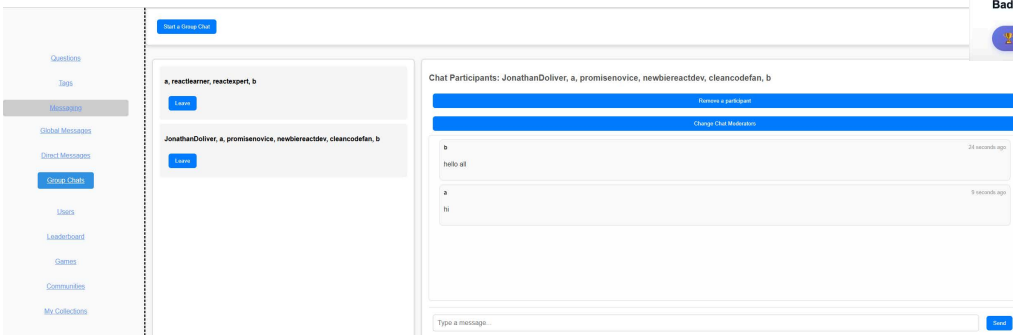
Authentication: Google OAuth

Testing: Jest, React Testing Library, Playwright, Cypress

CI/CD: GitHub Actions + Render Deployment

What We Built

We built a full-stack platform that lets people chat and work together in real time. WebSockets handle the live messaging, so when someone sends a message or joins a room, everyone sees it right away. All chats, profiles, and points are stored in the database so everything loads back instantly. Chat rooms support basic formatting and code blocks, and users can name rooms, invite others, and leave whenever they want. Profiles show avatars, bios, points, badges, and activity stats, and points update based on user actions. We also added Google OAuth so users can log in quickly and stay signed in securely. Overall, we ended up with working chat rooms, persistent data, customizable profiles, a real-time leaderboard, and a smooth login flow.



Future Work

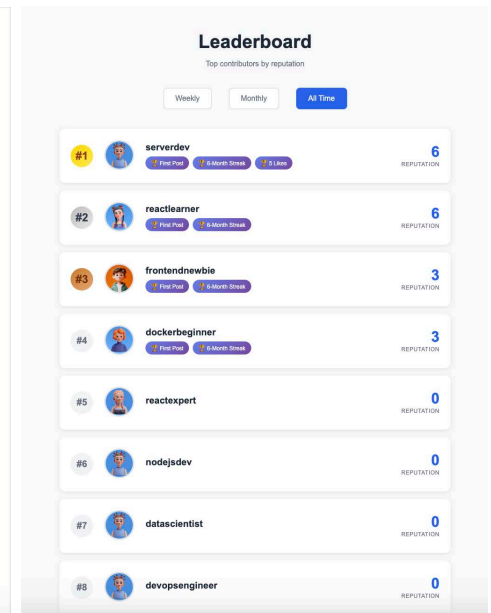
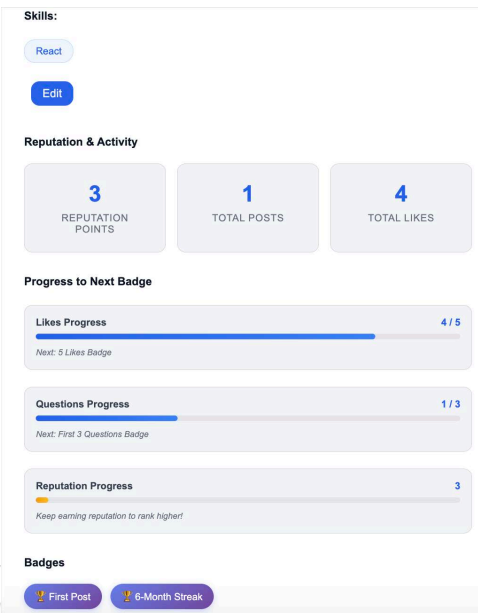
Several enhancements could further improve the platform's capabilities and user experience:

- More OAuth providers like Facebook
- Full admin dashboard for moderators
- Automatic detection of spam or toxic messages
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Links

Live App: <https://cs4530-f25-804-frontend.onrender.com>

GitHub Repo: <https://github.com/neu-cs4530/fall25-project-fall25-project-group-804>



Or login via:

GitHub

Google