

QUORUM

CS 4530 Final Project - Team 510 - Andre Kirby, Caden Elghazal, Rahul Rao, & Julian Haurin

Problem: Platforms like StackOverflow lack personalization, accessibility, and niche community engagement. Users can't customize their experience, find relevant content easily, or connect with focused groups –leading to low engagement and usability friction.

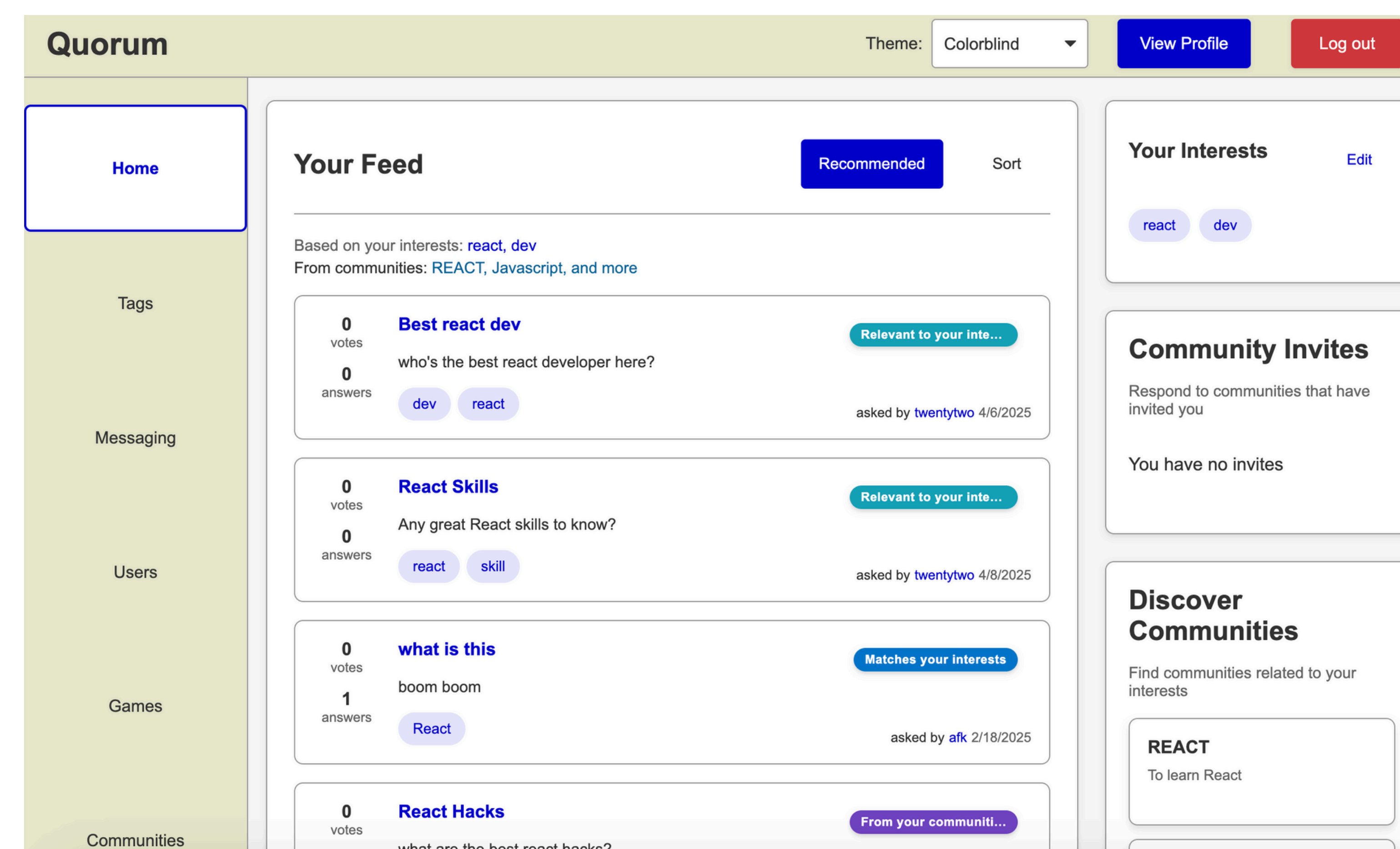
Features

Quorum improves the Q and A experience with user-created communities, theme customization, and a personalized home page. Users can join or create public or private **communities** with roles like admin, moderator, and member. Each community has its own post feed with sorting options for easy content discovery.

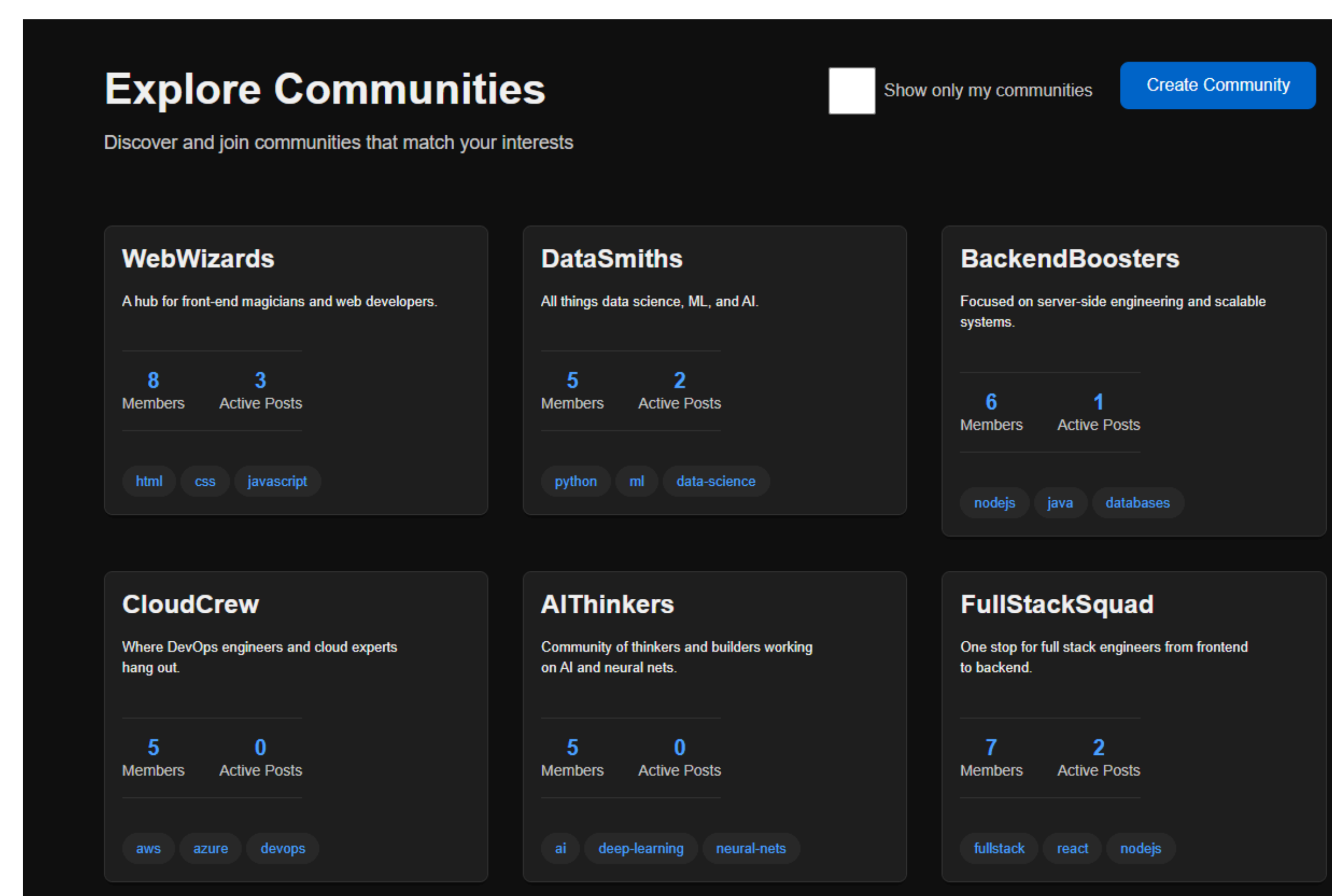
The platform includes **accessible themes** such as light, dark, colorblind, and high contrast. These settings are saved across sessions and designed to meet accessibility standards, including screen reader support.

The **home page** shows recommended posts based on user interests & activity. Users can manage profiles, invite users, update preferences, and find others with similar interests through a simple & clear interface.

Home Page



Communities



Tech Stack & Design

Built with a TypeScript/React front-end and Express/MongoDB back-end, the app supports role-based communities with private access and invite logic. Users have themes, interests, and accessibility features like text-to-speech. A custom recommendation algorithm ranks posts using tags, community ties, and engagement, with TypeScript filters used for processing.

Future work

Future improvements to Quorum include enabling usage without login by **saving session data via cookies**, adding **notifications** for community activity & **enhancing** the recommendation **algorithm**. We also plan to introduce an **AI-powered** feature that **generates suggested answers** to questions based on available documentation. Finally, **communities** will be able to start **games** to play **between members**.

[Link to Demo](#)

[Link to Repo](#)