



# Group 210 - DevArena

Winnie Chuma June Leigh Zhenzhen Liu Nathan Mintz

## Our Project

The original FakeStackOverflow offered limited interaction—users posted questions/comments and played nim, but had minimal control over their experience beyond basic Q&A.

We identified the core problem: a transactional relationship where users came for a specific answer, then left. Nothing encouraged ongoing engagement or community building beyond immediate needs.

DevArena aims to address this limitation by enabling deeper, more personal user engagement through three major feature categories. First, we added content creation, allowing users to write articles and create newsletters or podcasts. We also expanded entertainment options with additional mini-games (Uno, Gomoku, and Wordle) with a leaderboard to encourage casual interaction and community building. Third, we implemented community moderation tools, allowing users to flag inappropriate content and participate in maintaining site quality. These features transform DevArena from a transactional Q&A platform into an interactive platform that keeps users engaged and coming.

## Techonology Stack & Design

DevArena's additional features were implemented within the existing FakeStackOverflow codebase, which uses a MERN stack (MongoDB, Express.js, React, Node.js) following a client-server architecture. The frontend (React) communicates with the backend (Node/Express) through RESTful APIs for standard operations and Socket.IO for real-time updates, with MongoDB handling data persistence. For example, we added Home pages in the sidebar React UI and the pages rely on several React hooks to receive updates.

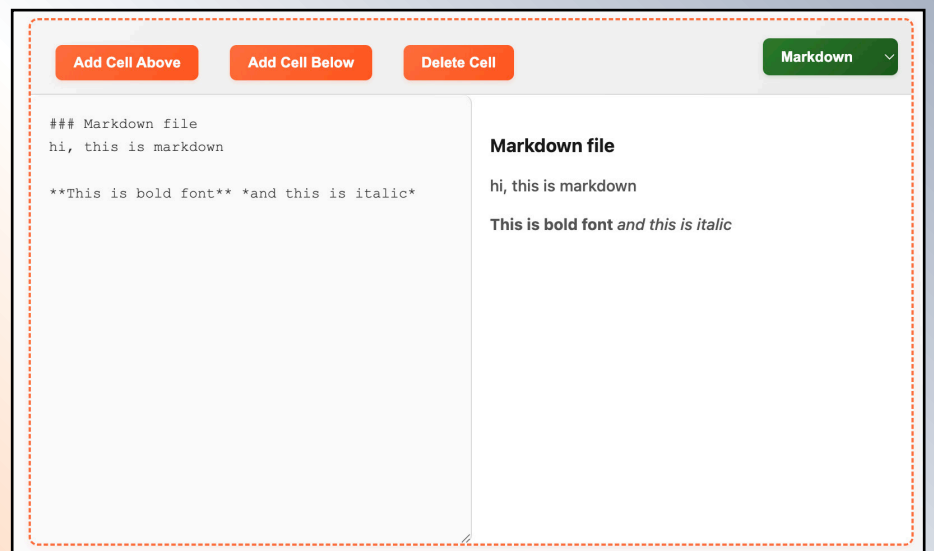
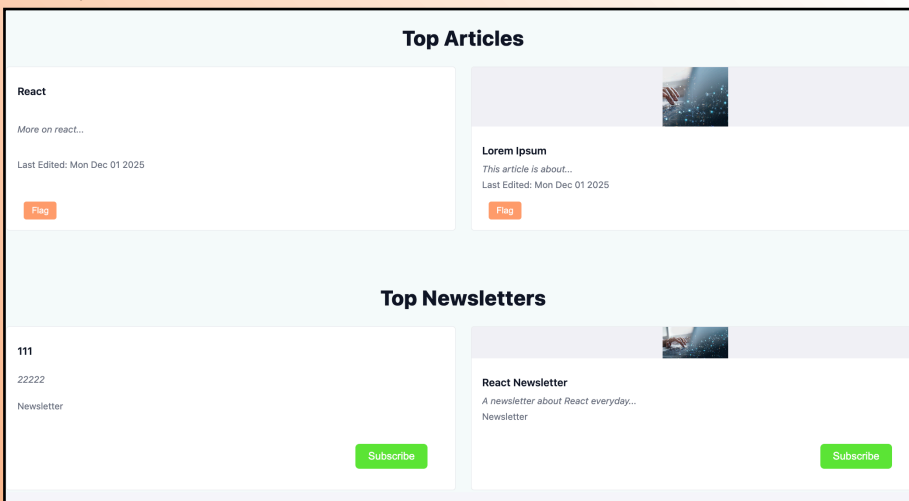
Our continuous integration pipeline runs an automated test suite on both frontend and backend components using Jest for unit testing and Cypress for end-to-end testing. Then, we deployed the site using modern CI/CD practices, with automated deployment triggered on successful test completion.

## Future Work

One avenue we could take to build out our project in the future is expanding the suite of moderator tools. Presently, our site supports content flagging and appeals, as well as a banned words database. This can be expanded to support a more robust set of tools for moderators. Some example additions include banning and suspending users, moderator messages to users, auto moderator tools, and more. Another possible expansion is in the games section, and more specifically, achievements. Currently, users can earn achievement badges for winning games, but there is opportunity for even more badges that a user can earn. To build on the project, we could add achievements for other milestones like total games played, rankings compared to other users, and other more specific achievements. A final possible addition we could make is to the articles system, by allowing users even more customization over their articles that Markdown and Latex do not natively support. This can include features like text colors, hyperlinks, and even code blocks.

## Showcase

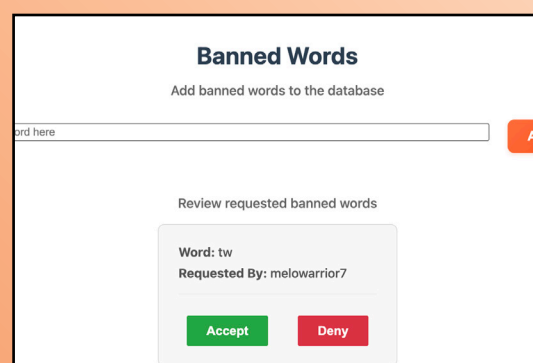
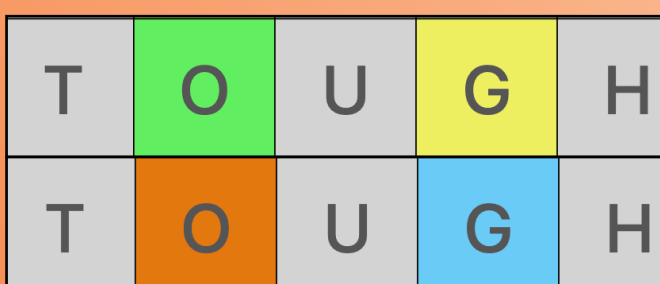
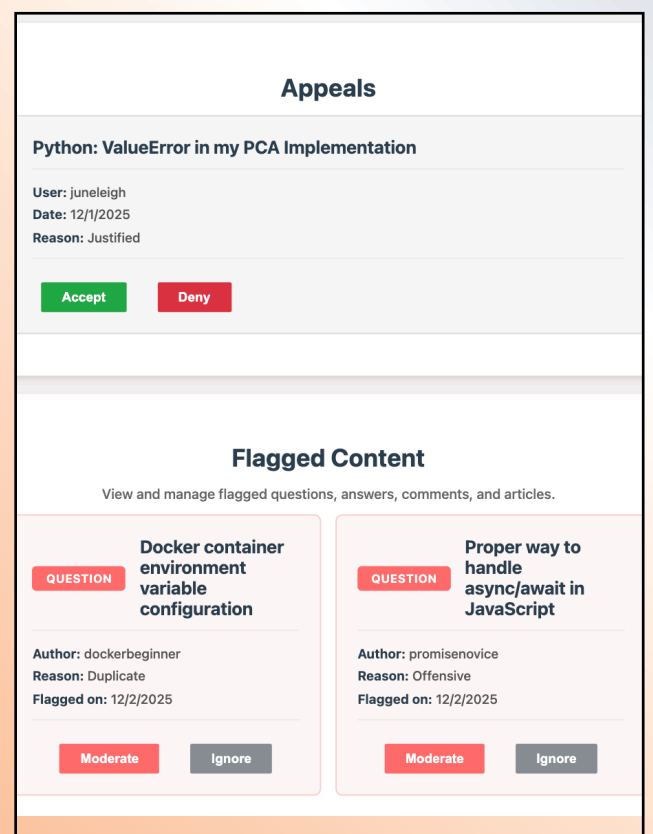
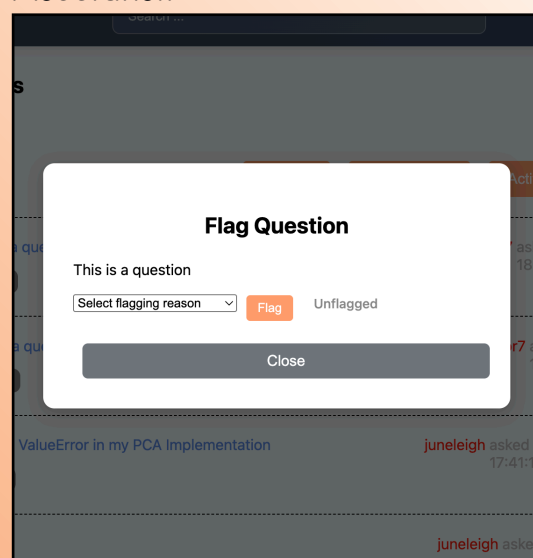
### Articles



### Games & Achievements



### Moderation



[GitHub Repository](#)

[Render Demo](#)