

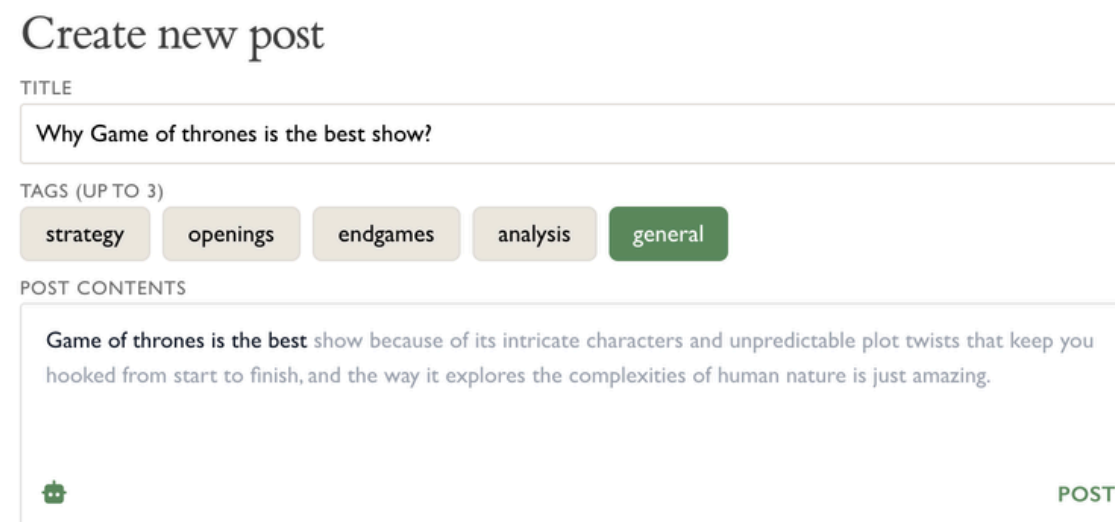


CS4530 Final Project: “Playbook”

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Our Features

PlayBook enhances community engagement through a robust reputation and discovery system. Users earn and lose karma through upvotes and downvotes on their posts and comments, with their karma history visualized as an interactive graph on their profile. A global search ties it all together, letting users discover posts, games, and other users through relevance-scored results. The platform also prioritizes communication and creativity. The Friends system lets users build their social network through a full friend request workflow for updates. Group Chats allow any number of users to communicate in real time. Finally, an AI Assist feature powered by Groq provides real-time writing suggestions while drafting forum posts, making it easier to articulate ideas and contribute to discussions.



What’s Next?

For future work we want to add more multiplayer games and enhance security by adding OAuth.



Our Tech Stack & Design

PlayBook is built on a TypeScript monorepo with three workspaces: a React frontend, Express backend, and a shared package for common types and validation schemas enforced with Zod. The client is bundled with Vite and uses React Router for navigation, Axios for HTTP requests, and Socket.IO for real-time updates across features like group chat messaging, friend notifications, and live game state. The server runs on Node.js with Express and persists data in MongoDB, with Keyv used for caching. New features – karma, leaderboards, search, friends, group chats, and AI assist – were layered onto the existing backend via dedicated service and controller modules, and surfaced in the frontend through custom React hooks and page components. The AI Assist feature integrates with the Groq API via the OpenAI-compatible SDK to provide real-time writing suggestions while drafting forum posts. Our continuous integration pipeline runs an automated test suite using Vitest for unit and integration tests and Playwright for end-to-end tests, with ESLint and Prettier enforced across all workspaces.

Leaderboard

Search user Sort/Filter

RANK	PLAYER	WINS	LOSSES	TIES	PLAYED	WIN RATE	HRS	KARMA
1	You	1	1	0	2	50.0%	0h	3
2	Sénior Dos	1	2	0	3	33.3%	0h	0
3	Frau Drei	1	0	0	1	100.0%	0h	0
4	The Knight Of Games	0	0	0	0	0.0%	0h	0
5	Yāo	0	0	0	0	0.0%	0h	1

Our demo is available [here](#). Our code is available [here](#)