



Group 301 | CS4530

PlaySpace

Community Gaming First

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Links

[Code Repository](#)

[Live Website](#)

Summary

Adding social features to PlaySpace, including friends, messaging, profiles, leaderboards, AI opponents, and chat moderation to build a connected and safe gaming community!

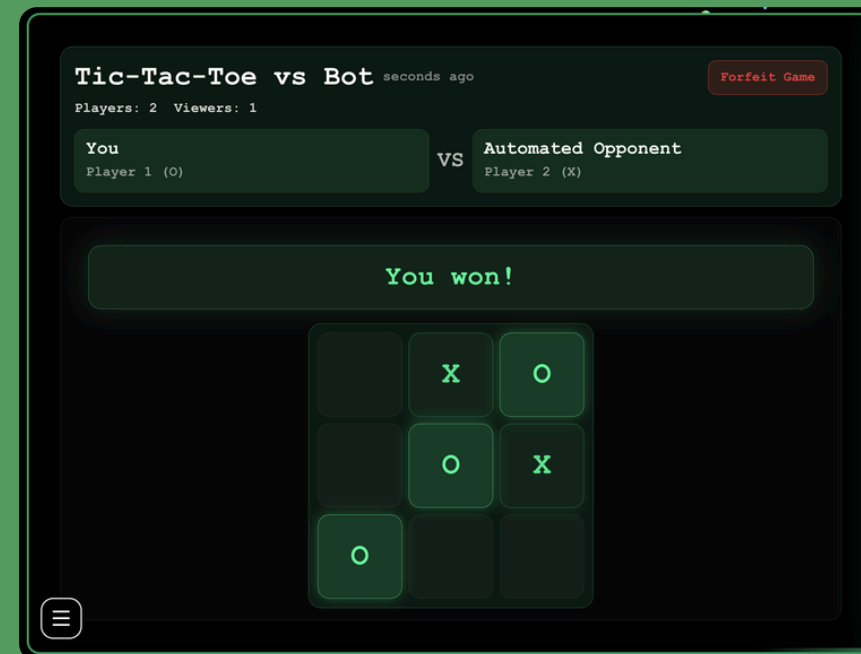
Leaderboard

#	Player	Won	Lost	Dra
1	The Knight Of Games	9	5	3
2	Anushka	5	2	2
3	Dani 2	3	0	3

Updated just now

See where you stand, filter by game type, and fight your way to the top of the rankings!

Bot Opponent



Improve your Tic-Tac-Toe skills anytime, with a Bot Opponent in easy or hard mode!

Tech Stack and Design

Frontend: React, Typescript, CSS, Chakra-UI, Lucide, React Bits

Backend: Node.js, MongoDB

APIs: Claude API (LLM-based chat filtering), OAuth 2 API (profile link verification)

Key Design decisions:

Friends:

- FriendRequest and Friend structures, where requests track sender, recipient, and resolution (accepted/declined); Friendship decoupled from user profile to avoid consistency issues
- getFriendStatus used across features (e.g., private messages, private games)

Filtering:

- Claude allows for greater flexibility in moderation by acting as an overall "moderation assistant" as opposed to a model trained on specific categories of harmful messaging
- Custom prompt to determine safety and provide reasoning if message is not allowed

Direct Messaging:

- Real-time, persistent messaging between two friends outside of games creates a more social environment
- Notifications appear in the header of the site and in the direct messages list by tracking the "lastReadAt" timestamp so users never miss a message from a friend

User Statistics:

- UserStats records are keyed by username:gameType; isolating stats per player per game, with win rate calculated on-the-fly and leaderboard results filtered/aggregated across game types at query time

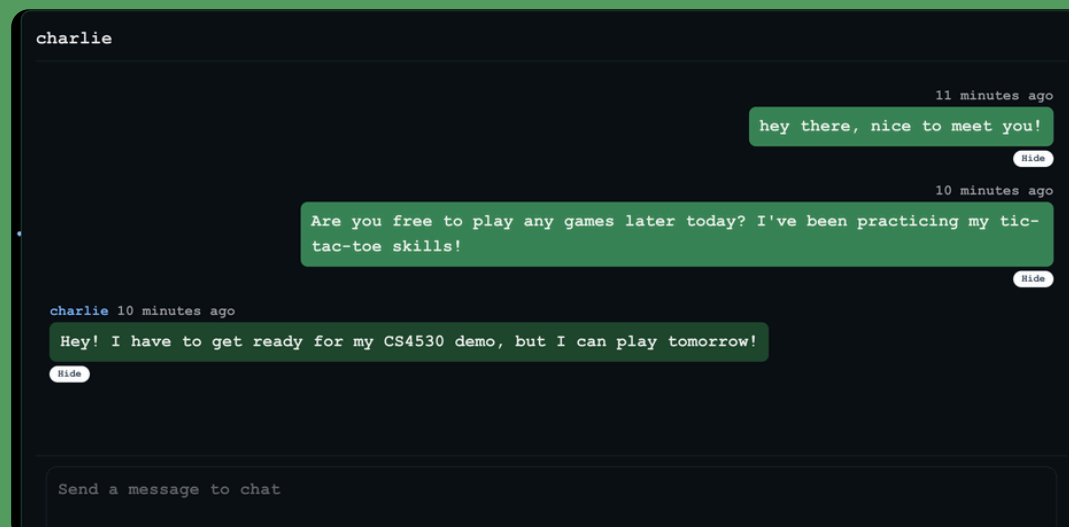
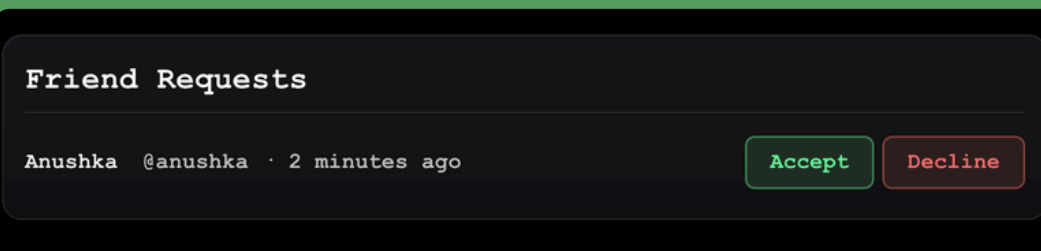
Profile verification:

- OAuth 2 API used for secure verification (PlaySpace does not need to store user credentials for other sites)
- Authorization code exchanged with external site (YouTube, Twitch) after user logs in to said site
- Profile link verified via username match

Bot Opponent:

- Bot opponent powered by Minimax (hard mode) and random move selection (easy mode)

Friends and Messaging

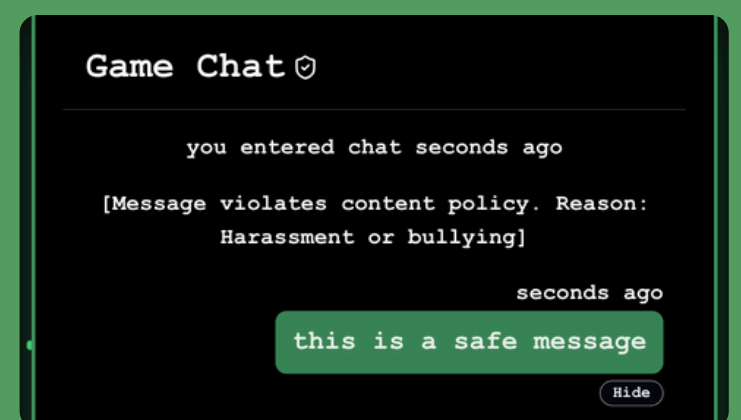
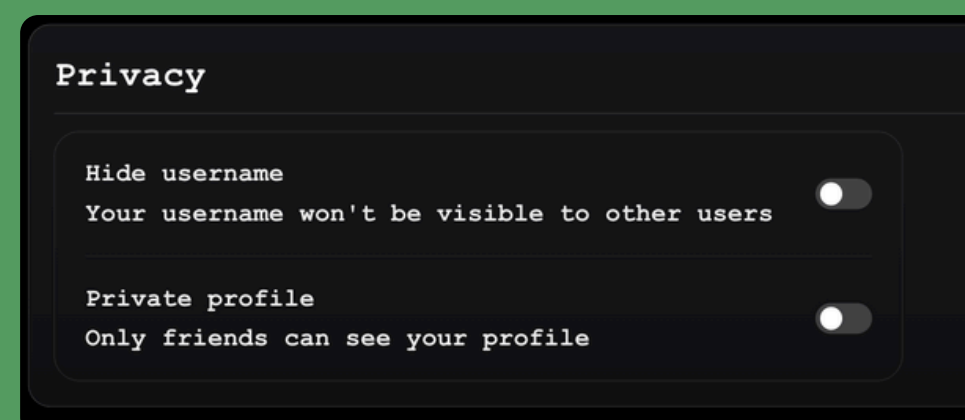


Add new friends to play with and chat with them outside of games! Look out for notifications in the header!

Privacy and Moderation

Stay safe on PlaySpace!

- Control who sees your profile
- Enable AI-powered chat filtering for a safer, cleaner experience



What's Next?

- More games (Checkers, Chess, Battleship)
- Tutorial mode for games
- Group chats with friends
- Customizable profile photos