

PrismPlay

Group 403

[Try it here](#)
[Source code](#)

Stephanie Chen, Kaitlyn Hu, Katya Luchette, June Leigh

What are we?

PrismPlay is an interactive gaming website for players of all skill levels. Build your community through friends, private chats, group chats, and scheduled games. Need extra help? Use in-game hints for Checkers and Connect Four to grow your skills and track your progress. You can also play anytime against a computer opponent – with adjustable difficulty levels to match your skills.

How it's made

Connect Four and Checkers were built following existing patterns to maintain clean architecture. Hints and game updates use WebSockets for real-time state sync, with a reusable React component and custom hooks to reduce duplication. Hint and computer opponent algorithms use a priority-based approach optimized for speed. The computer opponent uses a user stub to reuse existing game logic without storing extra data.

The friends feature uses a REST API with a new repository for connections and requests. Chat was extended to support direct and group messaging via WebSockets, with Cloudinary for image uploads and Linkify for hyperlink parsing. Scheduled games extend existing game records, filtered on the frontend until start time. The UI was modernized with Tailwind CSS.

What's next?

- AI-powered hints – deeper game state explanations to accelerate skill development
- Profile customization – profile pictures, bios, interests, and game history to strengthen community connections
- Leaderboards & player tiers – track top players by win rate and match competitors of similar skill levels to drive engagement

Tech Stack

- Frontend: React, Tailwind CSS, TypeScript
- Backend: REST APIs & WebSockets
- Database: MongoDB
- Integrations: Cloudinary, Linkify
- Deployment: Render

