

GameNite Party+

CS 4530 · Spring 2026 · Team 412 · Section 4

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🔗 Live App: spring26-project-group-412-1.onrender.com

🔗 GitHub: [neu-cs4530/spring26-project-group-412-1](https://github.com/neu-cs4530/spring26-project-group-412-1)

WHAT IS GAMENITE PARTY+?

GameNite is a browser-based multiplayer game platform. GameNite Party+ extends it with four new social features: a full **Monopoly board game**, a **real-time friend invite system**, **emoji reactions** in chat and on the board, and **user profile customization**. Together these additions transform GameNite from a quick two-player launcher into a social hub where players can connect, invite friends, and express themselves during gameplay.

FOUR FEATURE AREAS

Monopoly

Full turn-based board game for up to 4 players. Property purchase, rent, houses/hotels, jail, Chance, Community Chest, bankruptcy, and seamless disconnect/rejoin.

Friend Invites

Hosts invite players by username. Recipients see a real-time red badge on their sidebar. Invites show status (pending / accepted / declined / canceled) and auto-expire after 5 minutes.

Emoji Reactions

React to chat messages with emoji bubbles visible to all players in real time. During gameplay, board reactions float above your piece for 3 seconds then fade.

Profile Customization

Upload a photo (PNG/JPEG/WebP, max 2 MB), set a display name and bio. Preview before saving. Changes persist across sessions and appear throughout the app.

KEY DESIGN DECISIONS

Targeted invite delivery

Each socket joins user:{username} on connect, so invites push directly to the recipient with no broadcast overhead.

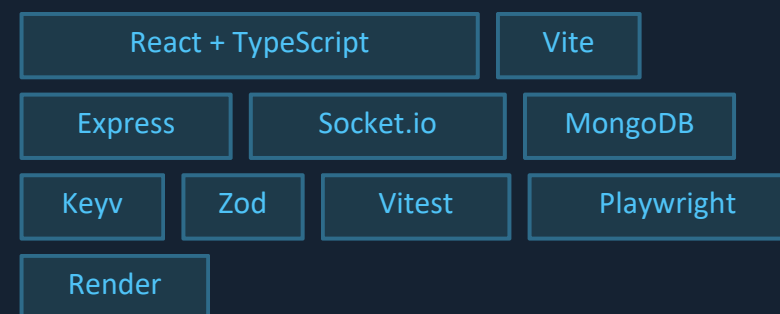
Quick board reactions

Board reactions use a dedicated socket event and are never written to the database, keeping chat history clean.

Shared type system

All Zod validators and TS types live in a shared package imported by both client and server — API contract violations fail at compile time.

TECH STACK



Three-tier architecture: React frontend, Express/Socket.io backend, Keyv key-value store backed by MongoDB in production. Shared package enforces type safety at compile time.

FUTURE WORK

- Invite privacy settings (friends only, anyone, nobody)
- Reaction preferences per user
- Profile picture privacy toggle
- Mid-game property trading between players
- Persistent leaderboard across sessions
- Additional Monopoly rule variants and presets

SCREENSHOTS

