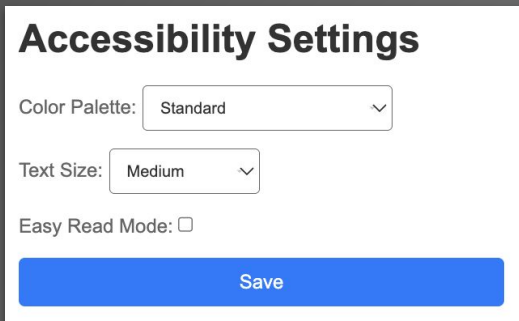


CS4530 Final Project: “NUOverflow”

Group 201: Jake Friedman, Zak Lembarra, Brett Netkin, Ashwin Kasargode

Features:

Accessibility



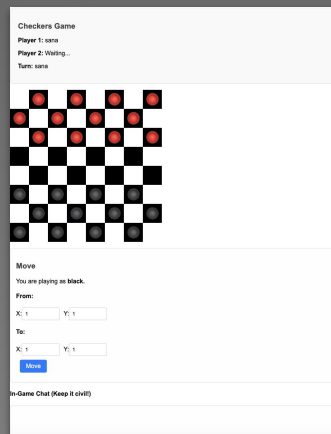
Accessibility Settings

Color Palette:

Text Size:

Easy Read Mode: ☐

Game Suite



Checkers Game

Player 1: none

Player 2: Waiting...

Turn: none

Move

You are playing as black.

From:

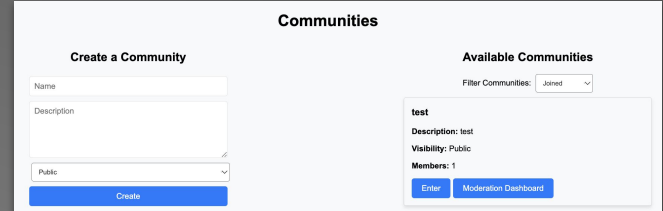
X: Y:

To:

X: Y:

In-Game Chat (Keep it civil!)

Communities



Communities

Create a Community

Name:

Description:

Public:

Available Communities

Filter Communities:

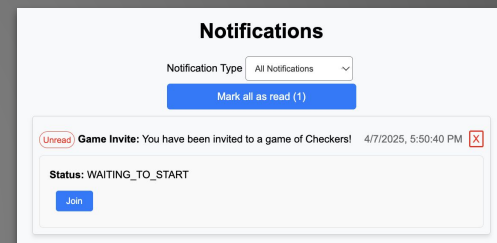
test

Description: test

Visibility: Public

Members: 1

Notifications



Notifications

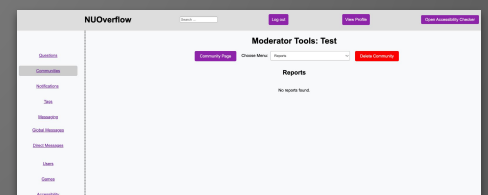
Notification Type:

Unread Game Invite: You have been invited to a game of Checkers! 4/7/2025, 5:50:40 PM

Status: WAITING_TO_START

Transforming FakeStackOverflow into NUOverflow, we decided to implement accessibility features via colorblind-focused color schemes, keyboard navigation, and screen readers. Real-time accessibility checks also flag potential WCAG compliance issues to assist in immediate improvements. Our second feature, communities, allow users to engage in conversation via a public or private forum. Public forums can be joined by anyone, while private forums can only be joined with an invitation from the administrator or moderator. All forums have one administrator who “founded” the forum and can have multiple moderators, which are appointed by the administrator. Our final feature is a functional game suite for checkers, which allows users to play against other users and track relevant game-related key performance indicators (numbers of wins vs. losses, efficiency metrics, etc.).

Moderation + Reports



NUOverflow

Moderator Tools: Test

Reports

No reports found

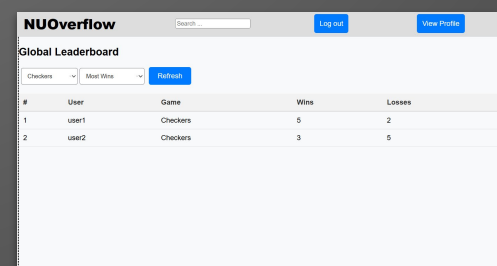
Tech Stack & Design

We implemented our features using the existing FakeStackOverflow codebase. We integrated Axe-Core to scan for accessibility violations based on Web Content Accessibility Guidelines (“WCAG”) on our website. We also overhauled the existing CSS infrastructure to use variables instead of hardcoded values and utilized the existing GameManager to implement Checkers. We built out new infrastructure for Communities to account for reports, administrators, and moderators, in addition to game statistics (i.e., wins & losses), public/private games, leaderboards, and in-game chat. Of note, in-game chat uses websockets and is destroyed when its associated game ends.

Future Work

With additional resources, we could expand NUOverflow's accessibility features by integrating AI-driven accessibility suggestions and automated WCAG compliance reports. We also plan to enhance the community forums by allowing cross-forum topic tagging and customizable moderation tools for administrators. For the game suite, we aim to introduce additional board games like chess or Go, along with matchmaking algorithms based on player skill level. We could implement persistent chat history with moderation capabilities to improve the social experience.

Leaderboard



NUOverflow

Global Leaderboard

Checkers

#	User	Game	Wins	Losses
1	user1	Checkers	5	2
2	user2	Checkers	3	5

Demo & Source

Demo: <https://cs4530-s25-201-client.onrender.com/>

Source: <https://github.com/neu-cs4530/spring25-team-project-spring25-project-group-201>