

CS4530 Final Project: “PancakeOverflow”

Group 516: Cecily Stevens, Edward Ibarra, Minh Nguyen



Our Features:

PancakeOverflow is an enhanced Q&A platform built with React, TypeScript, and MongoDB. The platform features community-driven discussions, gamification with daily login rewards and achievement badges, premium memberships, collections for organizing content, real-time direct messaging, and an auto-moderation system with appeals. Users earn coins through daily streaks and can unlock premium features for an ad-free experience with streak protection.

Our Demo:

Please find the link to our site here:

<https://cs4530-f25-516.onrender.com/>

And to the repo:

<https://github.com/neu-cs4530/fall25-project-fall25-project-group-516/>

Profile customization allows users to display selected badges and set privacy controls including user blocking. The auto-moderation system flags inappropriate content with an appeals process for review. The notification and moderation system helps preserve safety on the site and updates for users who use the site. The gamification system includes daily login streaks, coin rewards, achievement badges, and premium memberships.

Our Tech Stack and Design:

Built with React 19, TypeScript, and Vite on the frontend, using Chakra UI for components and Framer Motion for animations. The backend uses Node.js/Express with MongoDB/Mongoose for data persistence and Redis for caching and sessions. Real-time features are powered by Socket.io. The architecture uses shared TypeScript types across client and server, with OpenAPI specification for API validation. Tested with Cypress (E2E), Jest (unit tests), and Stryker (mutation testing).

Future Implementation:

Technical improvements include optimizations for more fluid transition and loading, developing a mobile version with React Native, UI enhancements to highlight our theme of food and pancakes.

