

CS4530 Final Project: "Plant Overflow"

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Our Project & Features

Plant Overflow enhances the basic FakeStackOverflow (FSO) app by adding three major systems that make the platform more personalized, interactive, and community-driven. We introduced:

- **Profile Page:** Users will be able to curate their profile page for self expression, follow or block other users for a controlled experience, and view a tailored page of questions from users they follow.
- **Plant-Parent:** Each user will be a plant-parent to a tree where actions like logging on daily and completing tasks related to interacting with platform functions will allow users to raise their plant.
- **Communities:** Users can search for communities using a clean and understandable UI, join private or public communities of interest, and communicate in channels.

Demo and Source

Our demo site is available at:

Server URL: <https://cs4530-f25-115-backend.onrender.com>

Deployed Project: <https://cs4530-f25-115-api.onrender.com>

GitHub: <https://github.com/neu-cs4530/fall25-project-fall25-project-group-115>

Technology Stack and Design

Our project uses React with Material UI on the frontend and a Node.js/Express/MongoDB backend. Channels and direct messages share a clean inheritance-based structure, while daily quests and achievements run on an event-driven system that updates users in real time through Socket.IO. Images are uploaded securely using Multer, Sharp, and Google Cloud Storage. Overall security is reinforced with JWT authentication, layered authorization middleware, input sanitization, and Helmet protections.

Future Work

Future work for Plant Overflow could focus on expanding the achievement and badge system, adding new types of plants and decorations, and enhancing community features with email notifications. On the technical side, improving socket performance, adding more comprehensive testing, and refactoring shared logic across quests, achievements, and chat systems would help the platform scale and support additional features in the future.

