CS 462: Senior Software Engineering Project Sprint Report 4

Project Title: Prototype a web-based tool for creating and executing task-delineated, collaborative, AI-assisted assignments

Group 28

Project Deadline: End of Spring 2025

Project Mentor: Sanjai Tripathi

Team Roles

Name	ONID	Role
Oliver Zhou	zhouo	Project Manager
Trent Matsumura	matsumut	Developer - Backend
Ethan Lu	luet	Developer - AI Integration
Collin Kimball	kimbacol	Developer - Web UI
Sai Meenakshisundaram	meenkass	Documentation

Contents

1. Sprint Overview

Planned for the Sprint

For this sprint, we focused on improving user role management, enhancing chatbot interactions with assignment context, refining database efficiency, and organizing the backend and frontend configurations. Specifically, Ethan aimed to integrate assignment-specific chatbot interactions, Trent planned to create filters for chat logs, Collin worked on refining user roles and assignment handling, while Sai contributed to documentation and file organization.

Accomplished During the Sprint

During this sprint, Ethan successfully implemented a URL linking assignments with chatbot interactions, improving contextual understanding when users inquire about assignments. Trent developed filtering mechanisms for chat logs, allowing users to efficiently access relevant chatbot conversations. Collin enhanced user role management by ensuring that roles could only be changed manually and improved assignment functionalities within the system. Additionally, Sai contributed by organizing backend files and updating documentation for course and assignment-related functionalities.

Furthermore, updates were made to the environment configurations:

- In the backend .env, the audience variable was updated:
  AUDIENCE=https://capstone-api/
- In the frontend .env, the corresponding variable was updated:
  VITE_AUDIENCE=https://capstone-api/

Issues Faced and How They Were Addressed

A key challenge was ensuring that the chatbot effectively linked assignment queries to relevant course contexts. Ethan tackled this by refining the chatbot's URL handling for assignment pages, ensuring accurate context retention. Trent faced challenges in designing efficient filters for chat logs but overcame them through iterative testing and user feedback. Collin addressed complications with user role enforcement by implementing stricter manual control mechanisms. Additionally, Sai streamlined file organization to improve maintainability.

Planned for the Next Sprint

For the next sprint, we plan to further refine chatbot interactions, enhance grading functionalities for instructors, and conduct additional usability testing. Other priorities include improving assignment submission tracking, optimizing performance for large-scale data handling, and strengthening documentation for easier system navigation. We also plan on hosting the website on the Oregon State server.

2. Individual Contributions

Ethan:

- Implemented URL linking assignments with chatbot interactions.
- Improved chatbot context retention for assignment-related queries.

Trent:

- Created filters for chat logs to improve searchability.
- Enhanced database interactions for more efficient query processing.

Collin:

- Refined user roles (manual role changes only).
- Improved assignment management functionalities.

Sai:

- Organized backend files and maintained structured documentation.
- Updated course and assignment-related documentation.

Oliver:

- Managed project coordination and assigned tasks.
- Reviewed team progress and provided feedback.
- Communicated with the project mentor to ensure alignment with objectives.

---

eod.