
EE/CprE/SE 491

Iowa State A.I. Schedule Companion

Weekly Report #7

Wednesday, March 20 – Tuesday, March 26, 2024

Group number: ssdec24-08

Client: Koby Fowler

Faculty Advisor: Abraham Aldaco

Team Members:

Koby Fowler - Overall Application Leader

Chandrashekar Tirunagiri - Frontend Design Leader

Raghuram Guddati - Backend Design Leader

Jacob Paustian - Artificial Intelligence Research Leader

Christian Deam - Meeting Manager

Anna Huggins - Team Manager/Communicator

Weekly Summary

A relatively quiet week where the people who were assigned tasks last week did such. That said, not much has been actually said, but the front end did push their work to git which was then merged with the main. It was also discovered that our attempt to use OpenAI would not work as it can not handle that many requests, which seems to be a problem with the free version usage limits, and we can't monitor its usage.

Past Week Accomplishments

GitLab Deployment & Meetings - Koby Fowler

This week was focused on various aspects of project development. It included working with GitLab for deploying to pages, participating in frontend meetings and design discussions, engaging in backend meetings and design sessions, and ensuring the application's main functionality was caught up and deployable. Overall, it was a productive week covering the project's frontend and backend aspects.

Class Preference Page Design - Chandrashekar Tirunagiri

- Worked on the class preference page and used prompts to ask the user questions for scheduling the classes.
- I also made some changes to the home screen

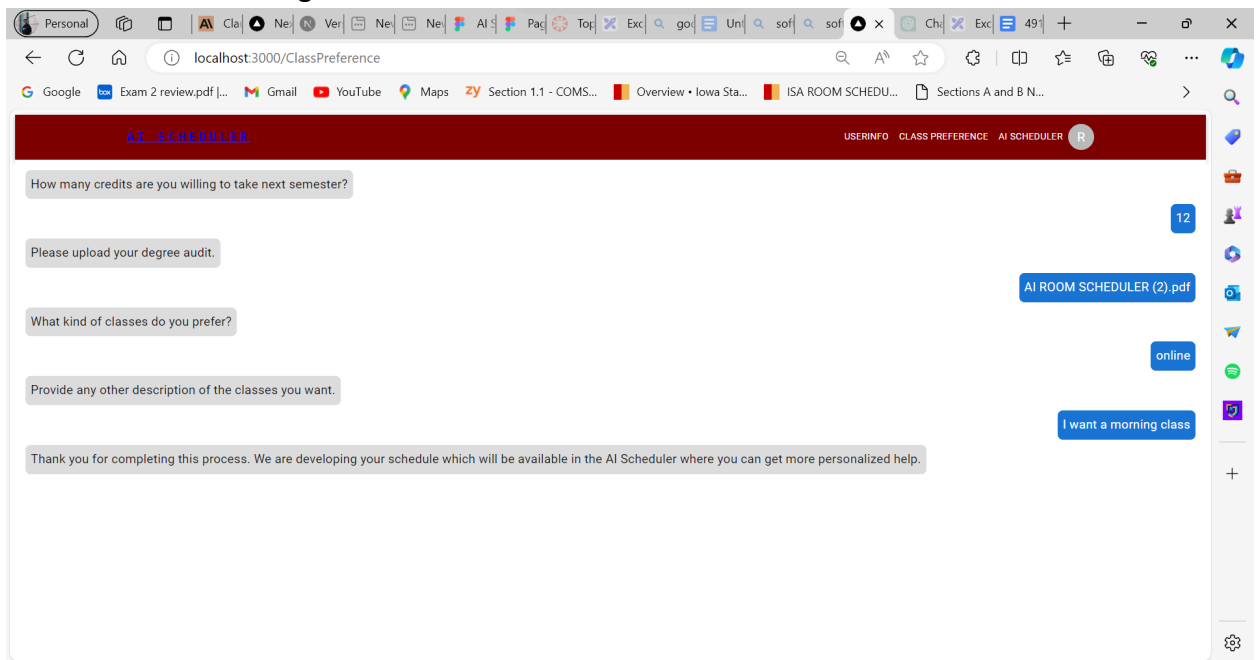


Figure 1: Class Preference page.

Backend - Raghuram Guddati

- Wrote Terraform scripts for the backend according to the architecture decided by the team.
- Modified the code a little to correct a few bugs.

A.I. Experimentation - Jacob Paustian

- Experiment with ways that would effectively handle massive training sets.

- Attempted a few rudimentary tests to perform some optimization techniques. This was unsuccessful.
- I tested the OpenAI key the school provided us. They gave us \$15 in credit for GPT 4.0, but we have the following problems.
 - We do not have access to the account this key was created from, so I have no good way to test our usage, which will be one of the most challenging parts of our entire project.
 - We do not have upgraded usage limits, so we still use a 200RPD (requests per day) and 3RPM (requests per minute) plan.
 - For reference, I measured the number of requests it would take to have the current implementation of my program feed OpenAI all of the information it needs. It's nearly 400 requests.
 - In all my testing thus far, I have spent about 23 cents on requests. While 15\$ in credits is appreciated, I believe it misses the mark entirely in solving our issues.

Lightning Talk 3 & Weekly Summary - Christian Deam

- Created Lightning Talk 3
- Created weekly summary

User Info Page Creation & Qualtrics Survey Distribution - Anna Huggins

- User Info Page Creation
 - Developed the foundation for a User Info page with prompts and options listed for users to select from
- Qualtrics Survey Distribution
 - Shared survey link with team
 - Distributed link to friends and colleagues to start getting responses

Individual Contribution Tracker

Name	Individual Contributions	Hours this Week	Hours Cumulative
Raghuram Guddati	- Wrote Terraform scripts for our backend - Learnt a little about our infrastructure	2.5	27.5
Christian Deam	- Lightning Talk 4 - Weekly summary	1.5	20.0
Jake Paustian	- A.I. Experimentation and research	2.5	31.0
Anna Huggins	- Frontend meeting - User Info page design - Design Doc Part 3	4.0	28.0
Chandrashekar Tirunagiri	- Frontend meeting - Class Preferences page design	5.5	27.0
Koby Fowler	- GitLab deployment for project pages - Frontend meeting & design sessions - Backend meeting & application readiness for deployment	4.0	46.0

Pending Issues

Issue #2 - Integration of Authentication System

- **Koby Fowler**
 - Status: Open (1/5) [IMPORTANT]
 - Get a Mock User Run going ASAP (allow a user to generate a schedule, and that schedule will be saved to their account)
 - Status: Pending (3/5)
 - Revolves around the seamless integration of the new authentication system with the front end.
 - While authentication ideas have been explored, further work is needed to ensure a smooth implementation and user experience. Additionally, addressing potential challenges or compatibility issues during the AWS account migration remains an ongoing concern. It is crucial to thoroughly assess and resolve these

pending issues to guarantee the successful continuation of the project.

- Status: Pending (3/26)
 - Still awaiting mock user testing.

Summary of Weekly Meeting(s)

Frontend Meeting (3/21) - Anna Huggins & Chandrashekar Tirunagiri

- Met briefly in person at the library
 - Divided front-end design work
 - User-Info page
 - Class Preferences Page
 - Discussed future changes
 - Re-design homepage and sidebar
 - Postman/back-end logic testing

Plans for the Upcoming Week

Koby Fowler

- 1. **Feature Implementation**: Prioritize implementing key features outlined in the project roadmap, ensuring alignment with stakeholder expectations and project goals.
- 2. **Testing and Bug Fixing**: Allocate time for rigorous testing of both frontend and backend functionalities, focusing on identifying and resolving any bugs or issues that may arise to ensure a smooth user experience.
- 3. **Deployment Preparation**: Prepare for deployment of updated versions or features by finalizing deployment scripts, conducting pre-deployment testing, and ensuring all necessary infrastructure is in place for a seamless deployment process.

Chandrashekar Tirunagiri

- To test the application in the backend using Postman
- Abstract the code for class preference and home screen
- Attend the backend meeting tomorrow.

Raghuram Guddati

- I plan to get started with the connectivity between the backend and frontend.
- I also plan to begin testing and running our mock applications soon.

Jacob Paustian

- Investigate Agents, Langchain's version of loading in and culling out all necessary and unnecessary training data live.
- I believe that is how Agents work, but I could be completely wrong as I have not actively experimented with them. If that is not what they are, I must return to the drawing board.
- I plan on meeting with the Backend team tomorrow to work on finalizing the design of the backend.

Christian Deam

- Actually push the SQL code to the git; I forgot to
- Lightning Talk 5 and then discuss Lightning Talk 6, as that's the one we present to the class
- Work with either front/backend to accelerate progress

Anna Huggins

- Update our senior design team's website
 - Add our reports
 - Get team members' photos to include on the site

- Add a project description
- Complete work on the User Info page
- Reconvene with Chan regarding the homepage design