
EE/CprE/SE 491

Iowa State A.I. Schedule Companion

Weekly Report #6

Wednesday, March 6 – Tuesday, March 19, 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

The team took a break because it was Spring Break. Some team members did fiddle with various tasks, but no significant breakthroughs happened except for a meeting on March 19th to figure out the course for the next development week. This last week was a break before our next major push in development.

Past Week Accomplishments

Hosting & Deployment Research - Koby Fowler

- Research optimal deployment and hosting options, as now we are forced to switch all our accounts for funding reasons. Providing a good opportunity to verify what we should use.

Web Page Design Research - Chandrashekar Tirunagiri

- I researched optimal designs to be used and worked on implementing the User Info page.
- Also, I researched how to train the A.I. model.

Backend - Raghuram Guddati

- Did some research on the backend for the Terraform scripts.

Demo Application - Jacob Paustian

At my internship, I used many of my findings with Langchain and OpenAI to create an additional demo application to parse our repo documentation. This serves as a good experience for what we need to be doing here soon.

Lightning Talk, Weekly Meetings & Tasks - Christian Deam

- Made Lightning Talk 3, made a very short weekly summary, and hosted a brief meeting.

Qualtrics Survey Completion & Distribution - Anna Huggins

- Qualtrics Student Survey
 - Updated survey based on feedback from Dr. Fila
 - Split the “Other” answer option into a separate question
 - Allows users to provide additional feedback
 - Included our team’s website link in the preamble
 - Published the Qualtrics survey and provided Dr. Fila with a link for distribution over Canvas Announcements
 - Additional distribution will be completed via team members to peers

Individual Contribution Tracker

Name	Individual Contributions	Hours this Week	Hours Cumulative
Raghuram Guddati	- Did some research on Terraform for our backend scripts.	1.0	25.0
Christian Deam	- Lightning Talk 3 - Hosted brief meeting - Weekly Summary	1.5	18.5
Jake Paustian	- Did small experiments with Langchain at my work - Spring break	1.5	28.5
Anna Huggins	- Qualtrics survey finalization & distribution - Spring break - Met briefly with Chan to discuss frontend's next steps	2.0	24.0
Chandrashekar Tirunagiri	- Met briefly with Anna to discuss frontend's next steps - Webpage design research	1.5	21.5
Koby Fowler	- Research hosting and deployment options - Enjoying spring break.	2.0	42.0

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.

Summary of Weekly Meeting(s)

Weekly Meeting - Christian Deam

- A brief meeting was called on March 19th, 2024, at 6:00 p.m.
 - Attendance: all team members were present except for Raghu, who could not join.
 - The primary purpose was to define everyone's roles and focus primarily on frontend/backend goals. People were assigned the designated tasks, and further communication with Raghu will be underway to understand how far along we are with the backend.

Frontend Meeting (3/19) - Anna Huggins & Chandrashekar Tirunagiri

- Met briefly after our weekly team meeting to discuss frontend's next steps
 - Scheduled a follow-up meeting in person to begin frontend database access testing
 - Updated on current Welcome page designs, as well as what additional pages must be created (user input and schedule generation pages)

Plans for the Upcoming Week

Koby Fowler

- Deploy and host everything necessary for our app. This includes Frontend, Backend, and instance of OpenAI Machine.

Chandrashekar Tirunagiri

- Frontend development
 - Meet with Anna in person on Thursday (3/21)
 - Distribute frontend work
 - Begin testing frontend access to backend databases using Postman
 - Adjust current page designs

Raghuram Guddati

- The plan is to finalize the backend infrastructure by setting up the required tables and kick-starting the integration process with the frontend components.

Jacob Paustian

- Experiment with ways that would effectively handle massive training sets. Perhaps this code is through some kind of optimization technique or perhaps research caching with OpenAI? I believe they have a caching mechanism called “Agents” that I haven’t looked into much.

Christian Deam

- Work on Lightning Talk 4
- Aid in Frontend development

Anna Huggins

- Frontend development
 - Meet with Chan in person on Thursday (3/21)
 - Distribute frontend work
 - Begin testing frontend access to backend databases using Postman
 - Adjust current page designs