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# **EE/CprE/SE 491**

## **Iowa State A.I. Schedule Companion**

### **Weekly Report #10**

*Wednesday, April 10 - Tuesday, April 16, 2024*

**Group number:** sdec24-08

**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

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### **Weekly Summary**

We worked on connecting the frontend and backend completely and implementing a fully communicating application. Once connected, backend fixes and changes were made to better fit the data needing to be handled.

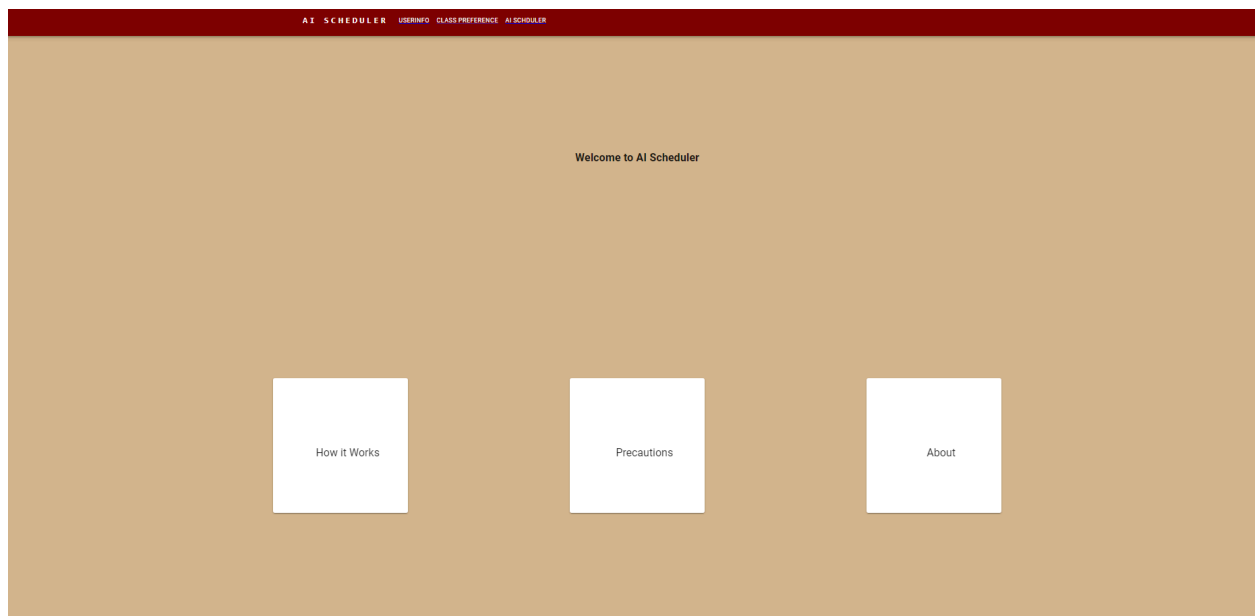
## **Past Week Accomplishments**

### ***Integration and Testing - Koby Fowler***

- Connected frontend to backend
- Reconfigure backend
- Start throwing requests from frontend to backend

### ***Homescreen Updates - Chandrashekar Tirunagiri***

- Updated the home screen and made it look good



***Figure 1: Home screen***

- Added the cards

### ***Hosting & Deployment Research - Raghuram Guddati***

- I did some research on how to host the backend on Amazon RDS.
- Also learned a bit about deployment using EC2 instances.
- Wrote a few terraform scripts for our backend SQL tables.

### ***Backend Discussion - Jacob Paustian***

- I met up with Koby regarding the future of the backend. We decided to forgo having a frontend, backend, database, and AI Service. Instead, the front end will communicate directly with the database using NextJS's ORM capabilities. According to Koby, this gives

the front end a robust and powerful database query interface. Assuming performance is not hurt by this change, this reduces the amount of running services we will need to host ourselves.

- Given that we no longer plan to use a backend, the AI Service will simply be the new 'back end.' Therefore, I went ahead and migrated the AI Service project to our backend repo and made adjustments to make the service stand-alone and ready to interop with the front end.
- Additionally, I researched what we would need from OpenAI's API to be able to handle all of the service requests we need. We need not a paid balance like we initially received from Iowa State, but a Tier 1 or higher usage tier. This would allow us to handle more per-minute and daily requests.

### ***Task(s) - Christian Deam***

- Lightning Talk 6

### ***Design Document & User Info Page Updates - Anna Huggins***

- Design Document
  - This week, most of my efforts were spent completing Design Document V1 and updating our senior design team website.
- User Info Page
  - This week, I made minimal changes to the code abstraction of my webpage and pushed updates to GitHub.
  - Met with Chan to discuss progress and other frontend design

## **Individual Contribution Tracker**

<b>Name</b>	<b>Individual Contributions</b>	<b>Hours this Week</b>	<b>Hours Cumulative</b>
Raghuram Guddati	- Did a little bit of research on how to host the backend on Amazon RDS. - Learned a bit of deployment using EC2 instance.	3.0	34.5
Christian Deam	- Lightning Talk 6 - Discussed backend business	2	24.0
Jake Paustian	- Met with Koby to plan out the future of backend/AI Service - Migrated AI Service and made it ready to be interoperable with frontend	3.0	37.5
Anna Huggins	- Met with Chan to discuss Homepage updates and User Info progress - Updated design document (added additional sections and updated previous ones based on TA feedback) - Updated senior design website	3.5	39.0
Chandrashekar Tirunagiri	- Customized the home screen - Added cards - Met with Anna to discuss Homepage updates and User Info progress	3.0	35.0
Koby Fowler	- Connected frontend to backend - Reconfigure backend - Start throwing requests from frontend to backend	4.0	55.0

## **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.
- Status: Pending (4/2)

## **Plans for the Upcoming Week**

### ***Koby Fowler***

- Scurry to make this demo ready. Clean up frontend so it looks nicer for demo and load backend with example data.

### ***Chandrashekar Tirunagiri***

- Meeting the backend team tomorrow at 2pm
- Working more on the UI of the front end.

### ***Raghuram Guddati***

- Work with Koby to connect the backend and frontend
- Enter data inside the tables for testing and demo

### ***Jacob Paustian***

- Prep work for a demo. We will want a proper demo for our final presentation, so I will need to be working with frontend (once they push their latest work) to get some basic demo-ready features.

### ***Christian Deam***

- Make final presentation
- Work with backend to build it

### ***Anna Huggins***

- Complete User Info Page
  - Add all question components and submit button
  - Update navigation bar
- Help Chan with homepage