EE/CprE/SE 492
Iowa State AI Schedule Companion
Status Report #4
Friday, October 4 – Thursday, October 31, 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

Status Summary

Over the last few weeks, our team has continued their designated efforts in revamping the frontend and implementing more extensive backend functionality. More specifically, efforts have been made to implement an Iowa State-themed universal theme for webpages and allow for degree audit pdf uploads. Overall, these efforts have gone smoothly, though more efforts in integration will be needed soon.

Past Week Accomplishments

Koby Fowler

- Worked on integrating maps into the frontend

Chandrashekar Tirunagiri

- Meet with Raghu and Jacob on how to connect to AI service.
- Done with connecting with AI using my own open ai api key and would give the followup chat.
- Updated the Chat interface.
- Met with Chan and Jacob to work on the connectivity of the AI to the backend.
- Worked on storing the pdf into a string format or the readable format in pgadmin.
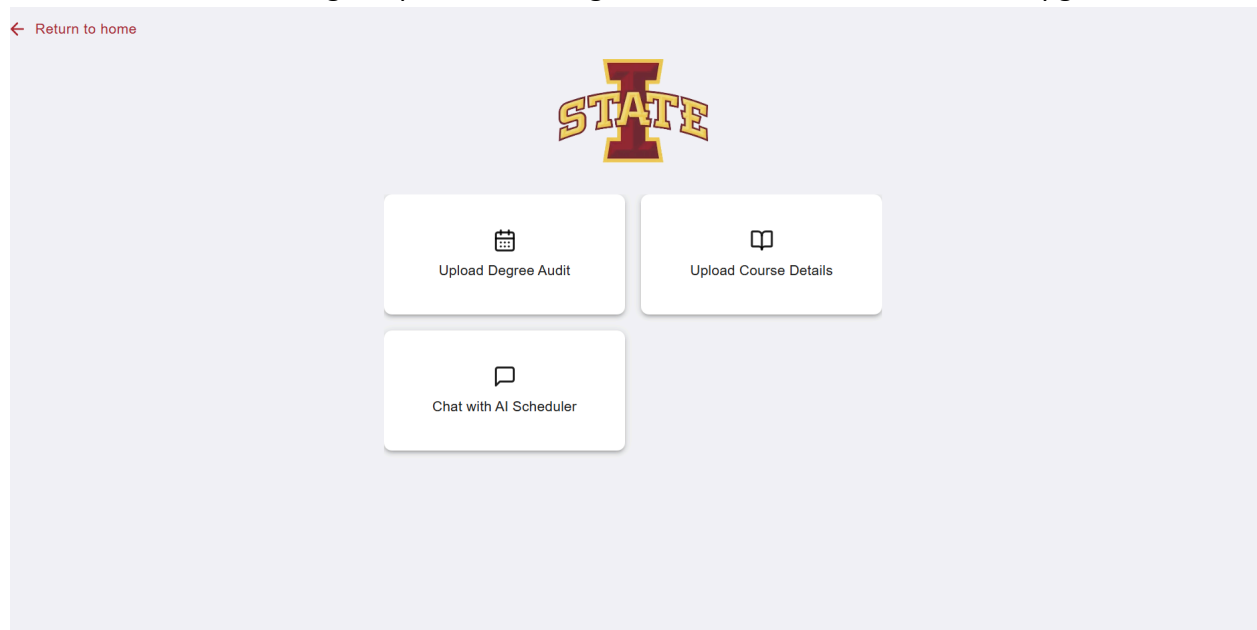

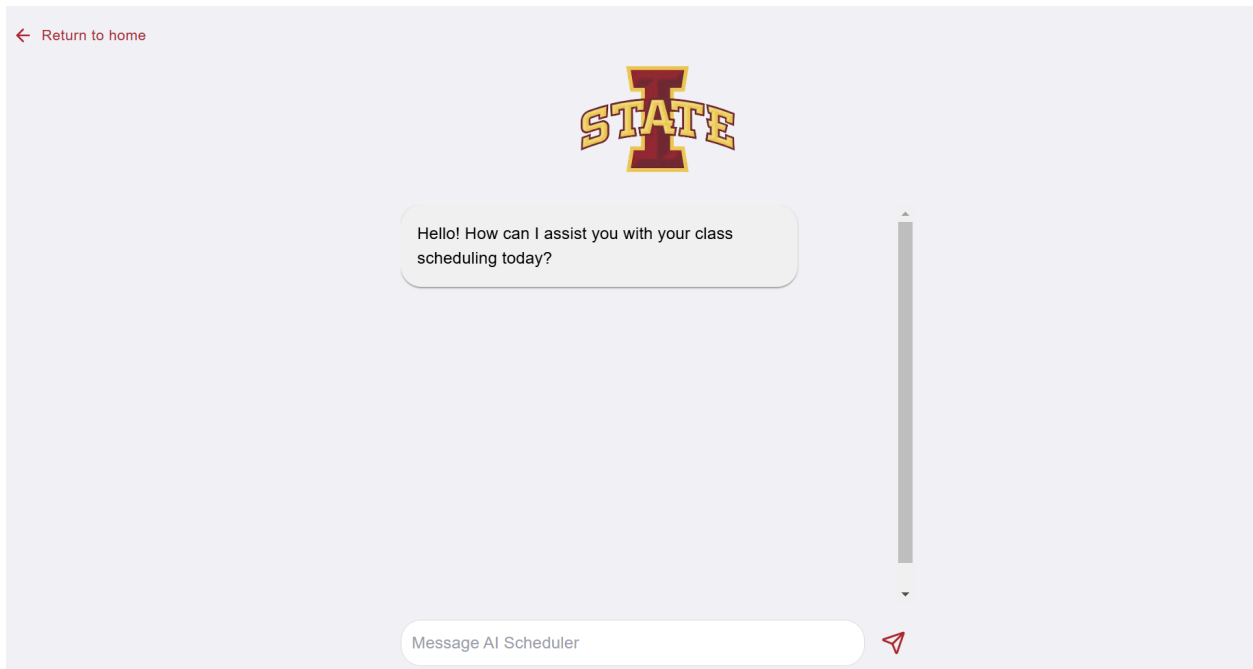Figure1: New Interface with Open AI Service

Figure 1.0: Integrated assistant-based chat system.

Note: The above image is intended to be just like the ChatGPT so the messages are automatically generated my OpenAI

Raghuram Guddati

- Met with Chan and Jacob to work on the connectivity of the AI to the backend.
- Worked on storing the readable data into separate columns for efficient and easier AI usage.

Jacob Paustian

- Met up with Chan and Raghu regarding how to connect our frontend, backend, and AI service

Christian Deam

- Incorporated backend userinfo data into the frontend userinfo page (had to remake userinfo page and edituserinfo page as new branch was used)
- Altered userinfo page to display user info and university info, taking up more space

Anna Huggins

- Finally got the ResponsiveAppBar() abstracted from the home/page.tsx file - this makes viewing easier when used on other pages.
- Created a "DefaultHeader.tsx" component - this can now be used for other pages, though I still need to integrate it beyond test/page.tsx
  - I also need to
- Imported custom fonts into a theme.ts template - this can be used universally for other pages
- Began debugging the "Hydration Error" on test/page.tsx
  - Although the page would load correctly, after refreshing a Hydration Error would pop up.
  - For my test/page.tsx, it seems that this error stemmed from the incorrect rendering of the theme - this was fixed by adding some code to force the client to wait until the server correctly loaded the theme
  - Additionally, the use of useEffect allows a better flow of rendering between the server/client for the theme.

```
/** Import light mode settings from Styles/theme.ts, allows us to override theme here.. */
const [mode, setMode] = useState<PaletteMode>('light')

const theme = useMemo(() => {
    // return createTheme(getDesignTokens(mode))
}, [mode]);

const CustomLink = styled(Link)(({}) => ({
    textDecoration: 'none',
    color: 'inherit',
        '&:hover': {
    textDecoration: 'none',
},
}))
```

Figure 2.0: Old way of loading custom theme.

```
useEffect(() => {
    setMode('light');
},[])

// const theme = useMemo(() => createTheme(getDesignTokens(mode)), [mode]);

const theme = useMemo(() => {
    // Only create the theme if `mode` is not `null`
    return mode ? createTheme(getDesignTokens(mode)) : createTheme();
}, [mode]);

if (mode === null){
    return null;
}
```

Figure 2.1: New, more functional way of loading custom theme.

IOWA STATE UNIVERSITY

AI Schedule Companion   USERINFO   CLASSPREFERENCES   AISCHEDULER   LOG OUT

Figure 2.2: New DefaultHeader.tsx component.

Individual Contribution Tracker

Name	Individual Contributions	Hours this Week	Cumulative Hours this Semester (492)	Total Cumulative Hours (491/492)
Raghuram Guddati	- Worked on integrated chat system	8.0	32	78.0
Christian Deam	- Remade userinfo page with user info to the left and university info to the right of the page - Userinfo page now displays (two) userinfo items	10	21	45.0
Jake Paustian	- I had a planning meeting with Chan and Raghu, but I have otherwise been swamped with midterms and other class projects	1.0	22	59
Anna Huggins	- Created a universal theme to use ISU colors - Correct Hydration error in the ResponsiveAppBar() - Attempted to merge with Christian's changes in userinfo2 branch	8.0	20.0	60.5
Chandrashekar Tirunagiri	- Met with other backend team members - Connected AI to chat interface	12.0	23.0	70.0
Koby Fowler	- Map integrations	4.0	27.0	82.0

Pending Issues

Upcoming Merge Conflicts - 10/31/2024

- **Anna - Status: Pending**
  - As of today, I have been unable to successively merge my frontend changes in branch uni_theme with the userinfo2. Although this will not immediately impact overall progress, eventually merging will become a prominent issue. This will hopefully get resolved in the near future.

Plans for the Upcoming Week

Koby Fowler

- Will continue working on map integration into the front end

Chandrashekar Tirunagiri

- Will meet with Raghu and Jacob on 11/1/2024 to connect and test the AI Service.

Raghuram Guddati

- Chan, Jacob, and I will collaborate on connecting the backend to the AI system. We'll conduct tests to confirm that everything is functioning as expected and to verify if specific data can be accurately retrieved from the degree audits.
- Will help Chan with frontend to incorporate the AI text page if successfully connected to the AI.

Jacob Paustian

- Chan, Raghu, and I plan to finalize our round trip tomorrow. This would be a significant milestone for our project.

Christian Deam

- Figure out how to edit user info data (change name or email)
- Fill in more data items (maybe age for user info and expected graduation date for university info)
- Incorporate Anna's new themes (if there's anything *I* have to do)
- Add more userinfo data to the backend to be used in the frontend, like with major and class standing (senior and such) in the university info section.

Anna Huggins

- Update the other pages (ClassPreferences, UserInfo, Home) to use the default theme
- Continue updating default theme to account for more components
  - Add dark mode
- Create a new branch off of Christian's userinfo2 to see if I can correct the merge failures I saw previously