

EE/CprE/SE 492 WEEKLY REPORT 4

02/28/2025 – 03/13/2025

Group number: 35

Project title: Universal Response Engine: LLMs for Good

Client &/Advisor: Ahmed Nazar and Mohamed Selim

Team Members/Role:

Abraham Toutoungi - Stakeholder Liaison

Gabriel Carlson - Communications Manager

Halle Northway - Meeting Coordinator

Brianna Norman - Project Deliverables Manager

Ellery Sabado - Timeline Coordinator

Emma Zatkalik - Assignment Manager

Weekly Summary

This week we continued our data collection. We are making good progress to have resources for every state for each of our two chosen topics. The front end is continuing to be adjusted to suit our accessibility standards for our users. The backend is still in progress as we keep adding more data for the RAG to use. There have been no significant changes to the goals or ideal final product of our project.

Past Week accomplishments

- Getting the front end and backend to agree on their category implementations
- Iowa data collection
- Front end text to speech

Pending Issues

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Individual Contributions

Name	Individual Contributions	Hours this week	Hours cumulative
Abraham Toutoungi	<ul style="list-style-type: none">- Reviewed PRs- Made changes to the sidebar to reflect advisor feedback- Made frontend page more responsive- Collected data for mental health for all 50 states- Read through the backend so that I am	12	93

	<ul style="list-style-type: none"> - up to date - Finished the front end with the front-end team 		
Gabriel Carlson	<ul style="list-style-type: none"> - Worked on taking the feedback from our advisor about Frontend improvements - Updated User Focus on Frontend - Updated sidebar dynamic styling and font sizes - Added location services support to frontend and POST body - Updated example prompt handling - Added window resize and click handlers 	12	76
Halle Northway	<ul style="list-style-type: none"> - Scraped data for several more states on housing and suicide topics - Collected more website resources for more states - Added output formatter to the LLM response on the backend 	11	87
Brianna Norman	<ul style="list-style-type: none"> - Adjusted some backend query categories - Fixed long lasting warning issues - Collected resource datasets - Formed datasets into csv files 	12	92
Ellery Sabado	<ul style="list-style-type: none"> - Collected more dataset/websites for financial and medical/chronic illness topics - Translated all of the medical topics to csv files - Tested the csv files and outputs of the LLM and took screenshots 	11	92
Emma Zatkalik	<ul style="list-style-type: none"> - Added handling of the categories in the backend - Looked into RAG evaluation - Started creating datasets to use for RAG evaluation - Data collection and organization into csv files 	12	93

Comments and extended discussion (optional)

N/A

Plans for upcoming week

- Split backend into groups, work on determining best method of dataset parsing
- Form datasets into workable formats

Summary of weekly advisor meeting

- For the paper, we will focus on medical but other categories we will add a future works section
- Talked about Frontend improvements for UI
- Begin working on evaluating Iowa dataset responses from LLM
- Met with our Project Advisor for updates and feedback on current implementation
- Brainstorm an additional feature that will make this work stand out more for our paper and to show there's more innovation behind it.
 - Ex. Some sort of innovative aspects like sentiment analysis
 - Can we involve a tool or agent Agent library for langchain
<https://python.langchain.com/v0.1/docs/modules/agents/>
 - Using lat/lng get relevant information using a tool?
 - Webscraping tools?
 - Whatever you can put in a function can be called by the llm
 - Think of “how can we make the LLM do something that is out of the box to a person in crisis that will help them”
 - The conference category is called E-health services
 - Optional if we want to extend this work into a research type of article called a journal article. The six pages will be expanded into more detail with more innovation into 12-14 pages.