

Assignment_4

Submission:

Submit your assignment as a SINGLE ZIP file online by the due date.
Your submitted ZIP file must have the name:
Assignment_4_Your_LastName.zip

Deliverables:

Your ZIP file for the assignment submission must include the following:

- Your refined UML design class diagram considering the requirements listed below.
- The UML Activity Diagrams to subscribe and unsubscribe for any topic to be notified of new postings.
- Utilize the Observer design pattern in your refined design class diagram to subscribe and unsubscribe for any topic to be notified of new postings.
- All source code that you installed, compiled and built on your personal computer.
- Panopto video recording of a live run of your code on your personal development computer.

Requirements Specification:

Consider the provided Blogging Platform - Requirements Specification and reuse/modify the software artifacts that you have completed for the blogging platform using **UML** and **React/Material UI** in the prior assignments, implement the following requirements using **React/Material UI**:

1. Provide the user with the feature to subscribe and unsubscribe for any topic to be notified of new postings.
2. Provide the user with the feature to generate a reply to any post on any topic using OpenAI Chat Completion End Point. The user must be provided with Switches toggle the state of a single setting on or off for OpenAI generated reply.
3. Implement the requirement to store the posts of any topic in ElasticSearch as a document datastore backend.
4. Provide the user with the feature to search posts on any topic using ElasticSearch as a document datastore backend.
5. Provide the user with the feature to ask the OpenAI-assisted Agent to recommend activities based on current weather conditions, real-time events/search (current sports events), and location of the user.
 - **Weather.** Resources/APIs to get current/forecast of Weather Conditions:
 - <https://open-meteo.com/>
 - <https://openweathermap.org/api>
 - <https://weather-gov.github.io/api/general-faqs>
 - **Location.** Resources/APIs to get current User Location:
 - <https://ipapi.co/json/>
 - https://developer.mozilla.org/en-US/docs/Web/API/Geolocation_API/Using_the_Geolocation_API
 - **Internet Search.** Resources/APIs to perform real-time internet search:
 - <https://serpapi.com/dashboard>
 - **OpenAI.** Resources/APIs for OpenAI:
 - <https://platform.openai.com/docs/api-reference/chat/create>
 - https://cookbook.openai.com/examples/how_to_build_an_agent_with_the_node_sdk