Assignment_5

Submission:

Submit your assignment as a SINGLE ZIP file online by the due date. Your submitted ZIP file must have the name: Assignment_5_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 interaction diagram** for the feature "Recommended For You".
- **Design patterns** utilized in the refined design class diagram.
- 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.
- All **Visio** files for the **UML Diagrams**
- A **PDF document** that has all **UML diagrams** and the **annotated design pattern**s on the **design class diagram**.

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 feature to generate recommendations for the user utilizing OpenAI Chat Completion End Point. The user must be provided with 3 the following recommendations consider their current locations and weather conditions:
   - 3 restaurants
   - 3 musical events/concerts
   - 3 sports events

2. The Blogging platform UI must have a button with the label "**Recommended For You**" in the upper right corner. And when the user clicks the button, a popup window will appear that has the following:
   - Google Map that shows 10 ballons
     - Current user location (Green balloon)
     - 3 balloons to represent the **restaurants**. (Use appropriate balloon/icon/color)
     - 3 balloons to represent the **musical events/concerts**. (Use appropriate balloon/icon/color)
     - 3 balloons to represent the **sports events**. (Use appropriate balloon/icon/color)

3. Use serpAPI/Google real-time search to show the **Hour/day** of **open/close**.

4. Use the following resources to get real-time data for 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

5. Document and Annotate **2 Creational Design Patterns** that are used in your **UML Design Class Diagram**.

6. Document and Annotate **2 Structural Design Patterns** that are used in your **UML Design Class Diagram**.

7. Document and Annotate **2 Behavioral Design Patterns** that are used in your **UML Design Class Diagram**.