Essentials of Generative AI, Prompt Engineering, and ChatGPT

Course End Project Problem Statement

Course End Project: Virtual Project Management Consultant

Problem Scenario: Develop a series of prompts to enable ChatGPT to act as a virtual project management consultant, providing advice on project planning, risk management, team collaboration, and performance tracking.

Objective:

- To design and refine prompts that help ChatGPT offer practical, relevant, and actionable project management advice
- To demonstrate proficiency in prompt engineering by optimizing prompts for clarity, relevance, and user engagement
- To evaluate the effectiveness of the prompts based on user interactions and feedback

Steps to Perform:

1. Domain selection and research:
    a. Choose the specific domain of project management.
    b. Research common project management tasks, such as project planning, risk management, team collaboration, and performance tracking. Review existing project management methodologies and tools.
2. Define interaction scenarios:
    a. Identify key interaction scenarios, such as creating a project plan, identifying and managing risks, enhancing team collaboration, and tracking project performance.
    b. Outline the types of queries and expected responses for each scenario.
3. Initial prompt design:
    a. Create initial prompts for each scenario (e.g., **How do I create an effective project plan?)**.
4. Testing and refinement:

    a. Test the initial prompts with ChatGPT and analyze the generated responses.
    b. Refine the prompts based on the analysis to improve response accuracy, relevance, and personalization.
5. Iterative optimization:
    a. Conduct multiple iterations of testing and refinement.
    b. Experiment with different phrasing, context provision, and follow-up prompts to optimize interactions.
6. Evaluation criteria development:
    a. Establish criteria for evaluating the quality of ChatGPT's responses (e.g., accuracy, relevance, clarity, and user satisfaction).
    b. Use these criteria to systematically assess and improve the prompts.
7. User feedback collection:
    a. Share the refined prompts with a sample user group.
    b. Collect feedback on the interaction quality and usefulness of responses.
8. Final optimization:
    a. Incorporate user feedback to make final adjustments to the prompts.
    b. Ensure that the prompts are robust and can handle a variety of user inputs effectively.
9. Documentation and presentation:
    a. Document the prompt engineering process, including initial designs, iterations, and final optimized prompts.
    b. Prepare a report detailing the project, key findings, and the effectiveness of the prompt strategies.
    c. Present the project, showcasing the prompts and demonstrating their performance in live interactions with ChatGPT.
10. Future improvement suggestions:
    a. Identify potential areas for further improvement.
    b. Propose additional strategies or approaches for ongoing optimization of prompt engineering.