

3. Student Activity

Student Activity: Practicing Prompt Engineering for Specific Applications

Welcome to the hands-on activity session on **Prompt Engineering for Specific Applications!** In this activity, you will practice designing prompts for different domains: creative tasks, coding and problem-solving, and information retrieval and research. Follow the steps and examples provided, and then try creating your own prompts.

1. Prompt Engineering for Creative Tasks

Creative tasks involve generating content like stories, poems, or art ideas. The goal is to encourage the AI to think creatively and produce unique outputs.

Examples:

1. **Story Writing:**

- **Prompt:** "Write a story about a young girl who finds a magical book in her grandmother's attic."
- **Your Turn:** Create a prompt for a story about a mysterious island.

2. **Poetry:**

- **Prompt:** "Compose a poem about the serenity of a quiet forest at dawn."
- **Your Turn:** Create a prompt for a poem about the bustling life in a city market.

3. **Art Ideas:**

- **Prompt:** "Generate an idea for a painting that depicts the harmony between humans and nature."
 - **Your Turn:** Create a prompt for an art piece that represents the concept of time.
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2. Prompt Engineering for Coding, Logic, and Problem-Solving

In coding and problem-solving, the focus is on clarity and specificity to ensure accurate and efficient solutions.

Examples:

1. Python Programming:

- **Prompt:** "Write a Python function that checks if a number is prime."
- **Your Turn:** Create a prompt for a Python program that reverses a string.

2. Math Problem:

- **Prompt:** "Solve the equation $3x + 5 = 20$ and find the value of x ."
- **Your Turn:** Create a prompt for solving the equation $4x^2 - 12x + 9 = 0$.

3. Algorithm Design:

- **Prompt:** "Design an algorithm to find the greatest common divisor (GCD) of two numbers."
 - **Your Turn:** Create a prompt for designing an algorithm to sort a list of names alphabetically.
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3. Prompt Engineering for Information Retrieval and Research

For information retrieval, the aim is to obtain accurate and concise information by being specific and focused.

Examples:

1. Historical Research:

- **Prompt:** "Summarize the key events of the French Revolution in 150 words."
- **Your Turn:** Create a prompt to summarize the causes of World War I.

2. Scientific Inquiry:

- **Prompt:** "Explain the process of photosynthesis in plants."
- **Your Turn:** Create a prompt to describe the water cycle.

3. Current Events:

- **Prompt:** "Provide an overview of the current economic situation in India."
- **Your Turn:** Create a prompt to summarize the latest advancements in renewable energy.

Activity Instructions:

1. **Review the Examples:** Go through each example provided for the different domains.
2. **Create Your Own Prompts:** Use the "Your Turn" sections to practice creating your own prompts.
3. **Test Your Prompts:** If possible, use an AI model like ChatGPT to test the prompts you created and see the responses generated.
4. **Reflect and Refine:** Consider how the AI's responses align with your expectations and refine your prompts for better results.

By practicing these steps, you'll develop a better understanding of how to craft effective prompts for various applications. Enjoy exploring the possibilities of prompt engineering!