

EXP 2: Comparative Analysis of Naïve Prompting versus Basic Prompting Using ChatGPT Across Various Test Scenarios

Aim:

To evaluate how ChatGPT responds to Naïve (broad and unstructured) prompts compared to Basic (clear and specific) prompts across different scenarios. The analysis will focus on the quality, accuracy, and depth of responses generated under each prompt type.

Procedure:

Comparative Analysis of Naïve Prompting vs. Basic Prompting Using ChatGPT Across Various Test Scenarios

This analysis explores how ChatGPT responds to different styles of prompts—Naïve and Basic—and how these approaches affect the quality, accuracy, and depth of the responses generated. Naïve prompts are generally broad, open-ended, or unstructured, while Basic prompts are detailed, direct, and structured, guiding the model with specific information and context. This study includes multiple scenarios to assess ChatGPT's response variations based on these prompt types.

Scenario 1: Generating a Creative Story

Naïve Prompt

- Given Prompt: "Generate a creative story in about 150 words."
- Output: ChatGPT generated a whimsical story about Luna, a cat that stumbles upon a magical forest and embarks on an adventure to recover a missing Moonstone. While the story was imaginative, it lacked any thematic alignment with space exploration, which was the intended focus.

Basic Prompt

- Given Prompt: "Generate a creative story based on space and astronauts in about 150 words."
- Output: This time, ChatGPT crafted a story featuring Commander Zara, an astronaut exploring the mysterious planet Orbitus Prime. The tale included intriguing sci-fi elements, like signals from alien structures, and a suspenseful discovery of an ancient intelligence. The story was coherent, focused on space, and rich in detail, closely matching the prompt's intent.

Insight: The difference in the output shows that a Basic prompt with specific themes directs ChatGPT's creativity in the desired direction. Naïve prompts, while still creative, can result in content that may not align with the user's actual requirements.

Scenario 2: Answering a Factual Question

Naïve Prompt

- Given Prompt: "Explain to me about World War II."
- Output: ChatGPT provided a broad overview, mentioning key players, the Axis and Allies, and pivotal events like Germany's invasion of Poland and Japan's attack on Pearl Harbor. While informative, the response was relatively general and did not touch upon specific areas like the causes of the war or India's involvement.

Basic Prompt

- Given Prompt: "Explain to me in detail about World War II and its causes, important incidents, and the role of India in the war, in bullet points."
- Output: ChatGPT delivered a highly structured, comprehensive breakdown. It listed major causes such as the Treaty of Versailles and the rise of Fascism, detailed significant incidents like D-Day and the atomic bombings, and highlighted India's role, mentioning the contributions of the Indian Army and the efforts of the Indian National Army (INA) under Subhas Chandra Bose.

Insight: This scenario illustrates how Basic prompts lead to well-organized, complete responses. By specifying key topics in bullet points, the Basic prompt enabled ChatGPT to offer a thorough, targeted answer that effectively met the user's needs. Naïve prompts, in contrast, resulted in summaries that were too general for in-depth topics.

Scenario 3: Providing Study Abroad Recommendations

Naïve Prompt

- Given Prompt: "Give me recommendations for pursuing higher studies abroad."
- Output: ChatGPT provided general advice, covering broad areas such as selecting a field, choosing a country, considering scholarships, and understanding visa requirements. Although helpful, the advice lacked the specificity that would make it personally relevant. Basic Prompt

- Given Prompt: "Give me recommendations for pursuing higher studies abroad by asking five specific questions about my preferences."
- Output: ChatGPT first asked relevant questions, such as the user's desired field, preferred country, language requirements, financial aid needs, and post-study work plans. Based on the user's responses (Data Science, Germany, English program, financial aid required,

intent to work in Germany), ChatGPT then provided tailored recommendations. These included top German universities for data science, scholarship options (like DAAD), and information on Germany's post-study work visa policies.

Insight: This scenario demonstrates how personalized responses require prompt specificity. By asking clarifying questions, the Basic prompt enabled ChatGPT to deliver detailed, customized advice aligned with the user's unique goals. Naïve prompts, meanwhile, yielded generic advice without personal context.

Overall Findings

1. Enhanced Relevance and Focus

Basic prompts significantly improve the relevance of ChatGPT's responses by providing explicit guidance. This focused approach ensures that responses align closely with the user's intent, reducing the chances of deviation from the desired topic.

2. Better Organization and Depth

Clear, structured prompts lead to well-organized, in-depth answers. Basic prompts allow ChatGPT to deliver coherent and neatly formatted responses, particularly useful for complex subjects that require a breakdown of multiple points or perspectives.

3. Greater Personalization and User-Centered Responses

When Basic prompts are used to ask specific questions or indicate user preferences, ChatGPT can provide highly personalized responses. This is especially valuable for topics like career advice, academic recommendations, or customized guidance, where individual requirements play a crucial role.

4. Higher Accuracy in Complex Topics

In scenarios involving detailed factual information, Basic prompts direct ChatGPT to focus on essential elements, ensuring a more accurate and complete output. Naïve prompts, however, can lead to generalized summaries that may overlook critical details.

Conclusion

The analysis shows that Basic prompting consistently yields higher-quality responses than Naïve prompting across all test scenarios. Key findings include:

- **Enhanced Relevance and Specificity:** Basic prompts provide clearer instructions, enabling ChatGPT to align its responses more closely with user intent.
- **Improved Structure and Depth:** Structured prompts lead to detailed, organized answers, particularly for complex topics or multi-part questions.
- **User-Centric Personalization:** Basic prompts can prompt the model to ask clarifying questions, allowing for more personalized, context-aware recommendations.