

week - 2

Topic 1: Prompt Engineering

Assignment 1: Zero-shot vs Few-shot Prompting

- **Objective:** Understand the difference between zero-shot and few-shot prompting.
- **Instructions:**
 1. Pick a simple task (e.g., sentiment analysis of a sentence).
 2. Write a **zero-shot prompt** and test it using any LLM (OpenAI GPT or Hugging Face hosted models). Example:
 - “Determine if the following sentence is positive or negative: ‘I love my new phone.’”

Prompts and output:

Mail - Shruti Parate - Outlook x Sentence sentiment analysis x +

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GPT v Share ...

Determine if the following sentence is positive or negative: 'I love my new phone.'

The sentence "I love my new phone." is **positive**, because it expresses happiness and satisfaction. ✓

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Determine if the following sentence is positive or negative: 'What a day it was! '.

The sentence "What a day it was!" is **neutral/ambiguous** — it could be **positive** (if said with excitement or joy) or **negative** (if said with frustration or exhaustion).
Since no emotional context is given, we can't strictly label it as only positive or negative.

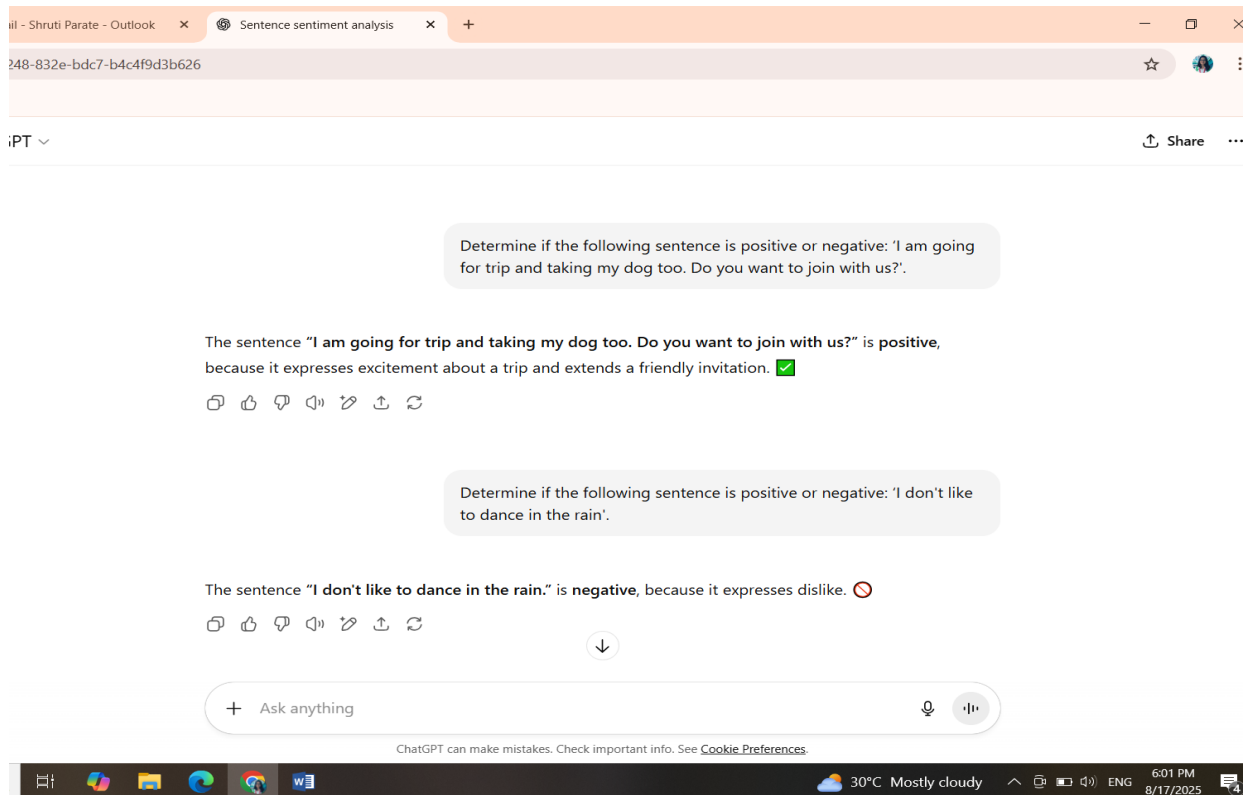
👉 Do you want me to assume a **sentiment label only (positive/negative)** for such cases, or should I keep pointing out ambiguity?

↓

+ Ask anything

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3. Write a **few-shot prompt** by giving 2–3 examples before the query. Example:

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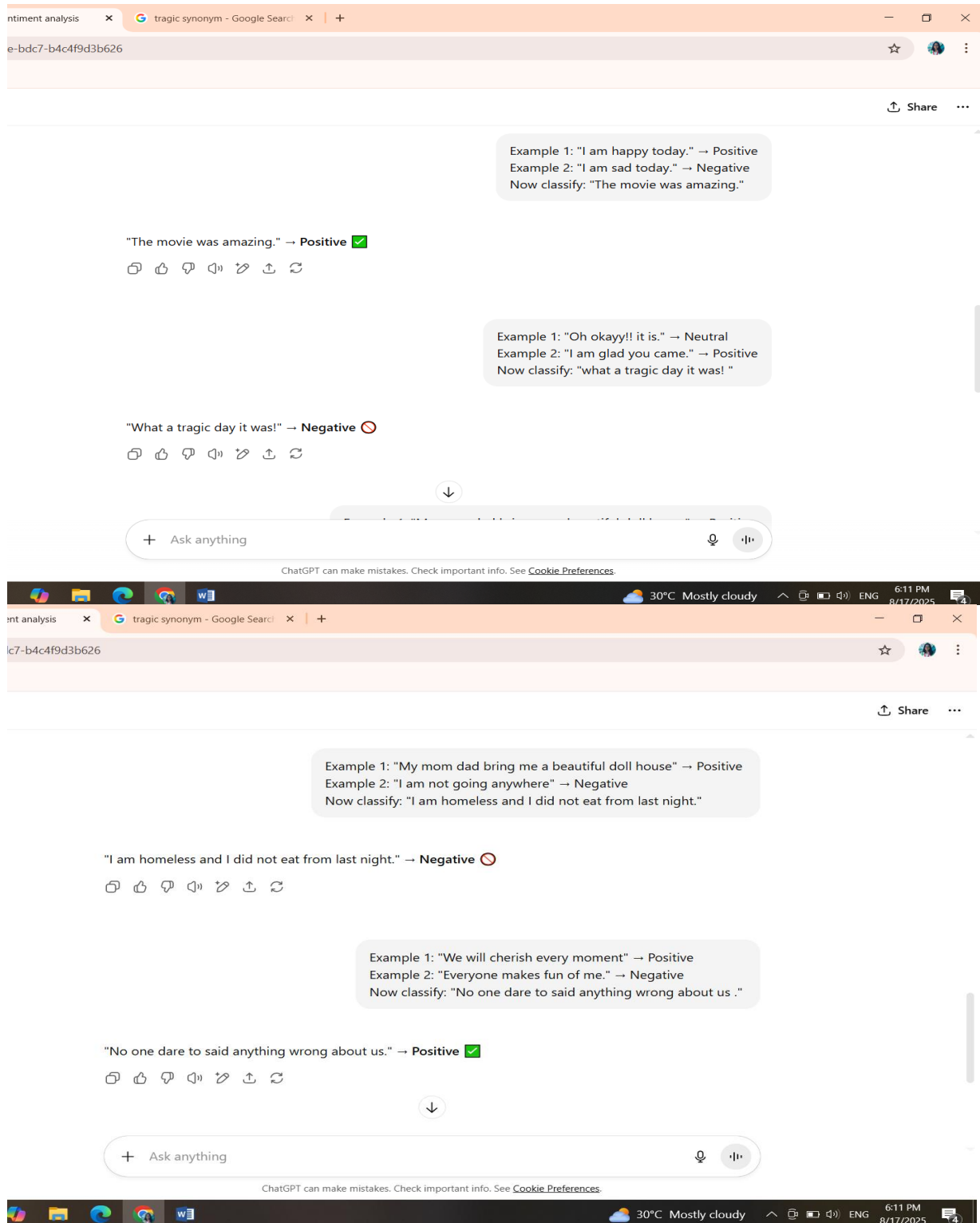
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Example 1: "I am happy today." → Positive

Example 2: "I am sad today." → Negative

Now classify: "The movie was amazing."

Prompts and output



4. Compare the outputs and note differences in accuracy.

Zero-shot prompting means asking ChatGPT for information on a specific topic without giving any prior examples. In this case, the model generates answers purely based on its existing knowledge. On the other hand, **few-shot** prompting tends to produce more accurate results because we provide 2–3 examples within the query itself. These examples guide the model, helping it analyse and respond more effectively. While zero-shot prompting can sometimes lead to ambiguous results, this issue is largely minimized when using few-shot prompting.

Zero Shot Prompting: Observation

- Works well for clear positive/negative sentences.
- Struggles with ambiguous sentences
- Sometimes outputs extra explanation, not just the label.

Few Shot Prompting: Observation

- More consistent labeling compared to zero-shot.
- Correctly identifies negative emotions (*tragic*, *homeless*, *hungry*).
- Learns from examples → gives direct label output without extra explanation.
- Handles context-sensitive words better (e.g., *tragic* clearly negative).