**Zero-shot vs Few-shot Prompting - Comparative Study on Creative Tasks**

**1. Objective**

To compare the effectiveness of zero-shot and few-shot prompting in generating creative, contextually relevant outputs. The experiment evaluates how each approach impacts style, tone, and overall quality, identifying strengths, weaknesses, and the contexts where each method performs best.

**2. Methodology**

* **Task chosen:** Generate one-sentence creative outputs (movie pitches) for fictional scenarios. This task was selected because it requires both creativity and stylistic consistency, making it ideal for observing the impact of prompt type.
* **LLM used:** Groq API — LLaMA 3.1-8B-Instant model.
* **Prompts:**
  + **Zero-shot prompt:** Instruction given without examples.
  + **Few-shot prompt:** Instruction preceded by 3 example idea–pitch pairs to establish tone and style.
* **Test set:** Six movie ideas, chosen to test situations where either zero-shot or few-shot might win.

**3. Results Table**

| **#** | **Movie Idea** | **Zero-shot Output** | **Few-shot Output** | **Winner** | **Why Winner** |
| --- | --- | --- | --- | --- | --- |
| 1 | A librarian finds a book that writes back. | "When a mysterious book defies the laws of reality, a quiet librarian must navigate the blurred lines between pages and reality to unravel a sinister plot that threatens to erase her world." | "When a mysterious book begins to rewrite its own story, a librarian must track down its dark past before the pages turn to a deadly truth." | **Few-shot** | More concise, stronger poster feel. |
| 2 | A retired detective solves mysteries by communicating with ghosts. | "When the living can't solve the case, a retired detective must rely on the dead to unravel the truth in 'Beyond the Veil'." | "When the case is cold, he calls upon the dead to help crack the code." | **Tie** | Zero-shot adds cinematic title, Few-shot cleaner and shorter. |
| 3 | Teenage gamer trapped in her favorite video game. | "When a teenage gamer's life becomes the ultimate game, she must navigate the digital world to escape before the game devours her reality." | "When the game becomes reality, she must level up her courage to defeat the ultimate boss: herself." | **Few-shot** | Snappy, clever twist (“herself”), perfect tagline style. |
| 4 | Scientists open a portal to the dinosaur era. | "When a team of scientists unleashes a secret from the past, they must navigate a treacherous land of giants and ancient terrors to survive the most epic adventure of their lives." | "In a blink of time, they unleash a world of wonder and chaos, where the laws of science are ruled by the roar of the ancient giants." | **Zero-shot** | More vivid, urgent survival stakes. |
| 5 | Robot learns to paint and becomes art sensation. | "When a brilliant but reclusive robot discovers a hidden talent for painting, its masterpieces ignite a global art phenomenon that challenges the very definition of creativity." | "When art meets artificial intelligence, a brilliant robot's brushstrokes ignite a masterpiece of controversy and creation." | **Few-shot** | Brevity + poetic metaphor make it memorable. |
| 6 | Astronaut wakes up alone in space. | "When the last human on a solo mission through the cosmos wakes up with no memory, he must confront the darkness that's been hiding in the shadows - and within himself." | "Lost in the void of space, a lone astronaut must unravel the truth behind their solo journey and confront the secrets that left them abandoned to the stars." | **Zero-shot** | Stronger tension, layered psychological hook. |

**4. Observations**

* **Few-shot strengths:**
  + Delivers consistent style across different ideas.
  + More concise and tagline-like, especially when examples match the desired tone.
  + Works well when brevity and punch are key (e.g., “Teenage gamer…”).
* **Zero-shot strengths:**
  + Often richer in imagery and drama.
  + Can surprise with unexpected twists or more vivid action scenes.
  + Works well for high-stakes, cinematic scenarios (e.g., “Dinosaur portal,” “Astronaut in space”).
* **Tie case:**
* In Retired detective & ghosts, both approaches produced equally strong outputs but with different appeals — Zero-shot offered a cinematic title, while Few-shot kept it crisp and minimal.
* **Key takeaway:**  
  Few-shot is best for **style control and consistency**, while Zero-shot is better for **creative variety and rich description**. Neither is universally “better” — choice depends on the goal.

**5. Conclusion**

This experiment shows that prompt type influences not only the factual quality of the output but also its **style, tone, and creativity**. For tasks where a consistent voice is essential, few-shot prompting offers predictable, polished results. For tasks where novelty and detailed imagery are valued, zero-shot prompting can deliver more surprising and atmospheric responses. In practice, the most effective approach is to **choose prompt style based on the specific needs of the task**.