

The five prompts I chose were:

1. Once upon a time, there was a robot who...
2. Explain photosynthesis to a 10-year-old.
3. Write a haiku about the ocean.
4. Explain recursion like I'm five.

5. Summarize this text: We hold these truths to be self-evident, that all men are created equal, that they are endowed by their Creator with certain unalienable Rights, that among these are Life, Liberty and the pursuit of Happiness.--That to secure these rights, Governments are instituted among Men, deriving their just powers from the consent of the governed, --That whenever any Form of Government becomes destructive of these ends, it is the Right of the People to alter or to abolish it, and to institute new Government, laying its foundation on such principles and organizing its powers in such form, as to them shall seem most likely to effect their Safety and Happiness.

Below are the results and evaluations of these five prompts.

### **Relevance and Coherence**

**Prompt:** "Once upon a time, there was a robot who..."

**Temperature:** 0.8

**Tokens:** 100

**Response:** A story of a robot dreaming of becoming human and approaching scientists.

**Relevance:** High — continues the narrative logically.

**Coherence:** Strong — flows smoothly with emotional depth and a goal-oriented arc.

**Tone:** Slightly whimsical, imaginative — which fits the higher temperature.

**Prompt:** "Explain photosynthesis to a 10-year-old."

**Temperature:** 0.5

**Tokens:** 80

**Response:** Simple analogy-based explanation, clear and factual.

**Relevance:** Excellent — age-appropriate.

**Coherence:** Very clear, sequential explanation.

**Accuracy:** Accurate and accessible.

**Tone:** More grounded and informative, due to the lower temperature.

**Prompt:** "Write a haiku about the ocean."

**Temperature:** 0.7

**Tokens:** 20

**Response:**

Waves crash on the shore

Saltwater breeze fills the air

Endless blue expanse

**Relevance:** Perfect — fits the form and subject.

**Coherence:** Follows the haiku structure (5-7-5 syllables) well.

**Tone:** Reflective and descriptive — appropriate and poetic.

**Creativity:** Balanced; tone matches temp (0.7 = creative but controlled).

**Prompt:** "Explain recursion like I'm five."

**Temperature:** 0.6

**Response:** Russian doll analogy.

**Tokens:** 100

**Relevance:** Spot on — uses a common analogy perfect for the age level.

**Coherence:** Clear and consistent.

**Accuracy:** Simplified correctly without being misleading.

**Tone:** Friendly and age-appropriate.

**Prompt:** Subset of Declaration of Independence summary

**Temperature:** 0.5

**Tokens:** 150

**Response:** Summarizes principles of equality, rights, and the right to revolution.

**Relevance:** Excellent — captures the key themes faithfully.

**Coherence:** Highly structured and logical.

**Accuracy:** No factual errors or biases detected.

**Tone:** Neutral and informative — matching the low temperature.

## **Inaccuracies or Biases**

None of the responses show factual inaccuracies or inappropriate bias. They're responsibly written, age-adjusted (when needed), and respectful of historical or technical content.

## **Effect of Settings**

**Temperature 0.5:** Produces more factual, neutral, and safe responses — great for explanations (e.g., photosynthesis, summary).

**Temperature 0.7–0.8:** Encourages creativity and personality — perfect for stories and poetry (e.g., robot story, haiku).

**Max Tokens:** Controlled the response length well — 20 tokens for haiku vs. 150 tokens for a full summary.

## **Reflecting on Limitations**

The application performs well in generating accurate general facts, summaries, and creative outputs like stories and haikus. However, it can sometimes hallucinate details or omit important nuance, especially in niche or complex topics. While it handles basic logic and structure well, it struggles with multi-step reasoning or tasks requiring internal consistency. The command-line interface offers a clean user experience, but lacks memory across prompts, limiting conversational depth. To improve the app, you could integrate fact-checking mechanisms, apply output filters, use structured prompt templates, or introduce a feedback loop to rate responses and refine quality over time.