

## PROJECT REPORT

**Model used: Open AI, gpt 4-o mini**

### **Creative**

Example 1:

Prompt: Write a Haiku

Temperature: 0.7

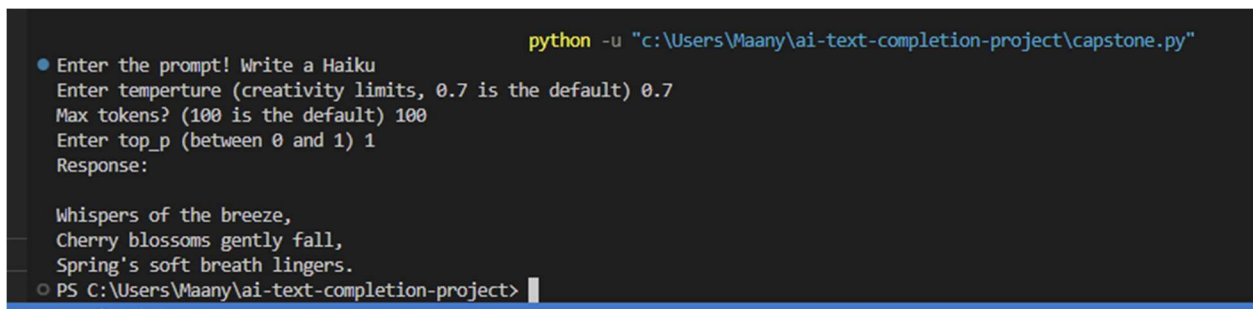
Max\_Tokens: 100

Top\_P: 1

Response: Image below

Analysis:

The response has high relevance, very coherent because it is a haiku, no inaccuracies or biases and standard values inputted for temperature and top\_p values kept the response normal and easy to understand



```
python -u "c:\Users\Maany\ai-text-completion-project\capstone.py"
● Enter the prompt! Write a Haiku
Enter temperture (creativity limits, 0.7 is the default) 0.7
Max tokens? (100 is the default) 100
Enter top_p (between 0 and 1) 1
Response:

Whispers of the breeze,
Cherry blossoms gently fall,
Spring's soft breath lingers.
○ PS C:\Users\Maany\ai-text-completion-project>
```

Example 2:

Prompt: Continue the story of a princess who slept under a curse

Temperature: 1

Max\_Tokens: 1000

Top\_P: 0.2

Response: Image below

Analysis:

It has high relevance, very coherent to the main plot, no inaccuracies or biases in the story. The dude who broke the curse was actually a prince and the name of the princess is Aurora but because the temperature was high and top\_p was relatively low, the response added some extra twists because of the high temperature but it was still a great story and easy to follow because the low top\_p kept the words somewhat mundane. Even though I set the max\_token to 1000, I guess the story had a lot more to say.

```
Enter the prompt! Continue the story of a princess who slept under a curse
Enter temperature (creativity limits, 0.7 is the default) 1
Max tokens? (100 is the default) 1000
Enter top_p (between 0 and 1) 0.2
Response:

Once upon a time, in the kingdom of Eldoria, there lived a princess named Elara. She was known for her beauty, kindness, and a spirit as bright as the sun. However, a dark curse had been cast upon her at birth by a vengeful sorceress, who had been slighted by the royal family. The curse decreed that on her sixteenth birthday, Elara would fall into a deep sleep, one that could only be broken by true love's kiss.

As the fateful day approached, the kingdom was filled with both excitement and dread. The king and queen, desperate to protect their beloved daughter, invited the most skilled knights and noble suitors from far and wide, hoping one would be able to awaken her should the curse take effect. They adorned the castle with flowers and held grand feasts, but in the back of their minds lingered the shadow of the curse.

On the eve of her sixteenth birthday, Elara wandered through the castle gardens, her heart heavy with the weight of the impending curse. She had heard the tales of true love's kiss, but she had never experienced love herself. As she gazed at the stars, she whispered a wish to the night sky, hoping for a miracle.

The next day dawned bright and clear, but as the sun reached its zenith, the curse took hold. Elara felt a wave of drowsiness wash over her, and before she could comprehend what was happening, she fell into a deep slumber, her body resting on a bed of soft petals in the castle's grand chamber.

News of the sleeping princess spread like wildfire, and many suitors came to the castle, each hoping to awaken her. Days turned into weeks, and weeks into months, but none could break the curse. The kingdom fell into despair, and the once-vibrant castle became a place of sorrow.

One day, a humble traveler named Kaelan arrived at the gates of Eldoria. He had heard the tales of the sleeping princess and felt a strange pull towards the castle. Unlike the knights and noblemen who had come before him, Kaelan was not driven by ambition or glory; he was simply a wanderer with a heart full of dreams.

As he entered the castle, he was struck by the beauty of the sleeping princess. He approached her bedside, his heart aching at the sight of her peaceful face. In that moment, he felt a connection he had never known before. He knelt beside her and whispered, "I may not be a prince, but I believe in the power of love."

With that, he gently pressed his lips to her forehead, a soft and tender kiss filled with sincerity and hope. The air around them shimmered, and a warm light enveloped Elara. Slowly, her eyelids fluttered open, and she gazed into the eyes of the stranger who had awakened her.

"Who are you?" she asked, her voice a melody that filled the room.

"I am Kaelan," he replied, his heart racing. "I came to find you, to believe in the magic of love."

Elara smiled, and in that moment, the curse that had bound her for so long shattered like glass. The kingdom erupted in joy as the news spread that their beloved princess had awakened. The king and queen rushed to her side, tears of happiness streaming down their faces.

As the days passed, Elara and Kaelan grew closer, their bond deepening with each shared moment. They explored the kingdom together, discovering hidden glades and secret waterfalls, laughing and dreaming of a future filled with adventure.

But the sorceress who had cast the curse was not finished with them yet. From the shadows, she watched, her heart filled with rage. She had underestimated the power of true love, and she would not let it go unchallenged.

One stormy night, as Elara and Kaelan stood on the castle balcony, the sorceress appeared before them, cloaked in darkness. "You think you have broken my curse?" she hissed. "I will not allow this love to flourish!"

With a wave of her hand, she summoned a tempest, dark clouds swirling above them. Elara felt a chill run down her spine, but Kaelan stood firm, his heart resolute. "We will not be afraid of you," he declared, taking Elara's hand. "Our love is stronger than your darkness."

As the storm raged, Elara and Kaelan focused on their love, their hearts beating in unison. A brilliant light erupted from their joined hands, pushing back the shadows that surrounded them. The sorceress screamed in fury as the light enveloped her, banishing her to a realm of her own making.

With the sorceress defeated, the storm subsided, and the kingdom was bathed in a golden glow. Elara and Kaelan stood together, their love

PS C:\Users\Maany\ai-text-completion-project>
```

## Informative

Prompt: Summarize this in 20 words or less (I inserted the introductory paragraph from this news article [Drug Smuggling Tunnel Recovered, Connects Mexico To US](#))

Temperature: 0.7

Max\_Tokens: 100

Top\_P: 1

Response: Image below

Analysis:

The response was relevant to the paragraph I fed the model, very coherent because I did tell it to keep it within 20 words or less. No inaccuracies or biases and inputting standard values temperature and top\_p values kept the response normal and easy to understand.

```
PS C:\Users\Maany\ai-text-completion-project> python capstone.py
Enter the prompt! Summarize this in 20 words or less "Border Patrol agents in the San Diego Sector Tunnel Team uncovered a partially constructed tunnel in April, connecting a home in Tijuana to U.S. territory. According to a June 18 Customs and Border Protection (CBP) release, the tunnel was being built to move narcotics undetected across the U.S.-Mexico border. Officers found it while it was under active construction. The tunnel extended 2,918 feet—just over half a mile—and reached more than 1,000 feet into U.S. land."
Enter temperature (creativity limits, 0.7 is the default) 0.7
Max tokens? (100 is the default) 100
Enter top_p (between 0 and 1) 1
Response:

Border Patrol found a partially constructed tunnel for drug smuggling, extending 2,918 feet from Tijuana into the U.S.

PS C:\Users\Maany\ai-text-completion-project>
```

## Instructional

Prompt: Explain what gravity is like I'm five years old

Temperature: 0.5

Max\_Tokens: 100

Top\_P: 0.5

Response: Image below

Analysis:

The response is a lot better structured and is a super creative way to help understand what gravity truly means, I did set the token limit to 100 and it the perfect length as its all full sentences. Low temperature and top\_p values resulted in sentences that were not as random and very clear.

```
(.venv) PS C:\Users\Waany\ai-text-completion-project> python -u "C:\Users\Waany\ai-text-completion-project\capstone.py"
Enter the prompt! Explain what gravity is like I am 5 years old
Enter temperature (creativity limits, 0.7 is the default) 0.5
Max tokens? (100 is the default) 200
Enter top_p (between 0 and 1) 0.5
Response:

Okay! Imagine you have a big, soft blanket. If you put a heavy ball in the middle of the blanket, it makes a dip or a little hole, right? Now, if you roll a smaller ball near the heavy ball, it will roll towards the heavy ball because of the dip.

Gravity is kind of like that! It's a force that pulls things towards each other. The Earth is like the heavy ball, and it pulls everything towards it, which is why when you jump, you come back down instead of floating away! So, gravity keeps us on the ground and makes sure we don't float off into space!

(.venv) PS C:\Users\Waany\ai-text-completion-project> []
```

Prompt: Teach me how to paint nails

Temperature: 0.6

Max\_Tokens: 1000

Top\_P: 0.9

Response: Image below

Analysis:

This is one of my favorite responses generated so far, probably because the max\_tokens was well within the range of the response. High relevance, coherent, no inaccuracies or biases. The top\_p value is high so is a wider range of words and techniques and the temperature is midly standard which leads to the response to be pretty standard and thorough with all the steps.

```

PS C:\Users\Vaanya\ai-text-completion-project> python capstone.py
Enter the prompt! Teach me how to paint my nails
Enter temperature (creativity limits, 0.7 is the default) 0.6
Max tokens? (100 is the default) 1000
Enter top_p (between 0 and 1) 0.9
Response:

Painting your nails can be a fun and creative way to express yourself! Here's a step-by-step guide to help you achieve a polished look:

### What You'll Need:
- Nail polish remover
- Cotton balls or pads
- Nail file
- Nail buffer (optional)
- Base coat
- Nail polish (color of your choice)
- Top coat
- Cuticle oil (optional)
- Small brush or toothpick (for clean-up, if needed)
- Paper towel or newspaper (for spills)

### Steps to Paint Your Nails:

1. Prepare Your Nails:
- Remove Old Polish: Use nail polish remover and cotton balls to take off any old polish.
- Shape Your Nails: File your nails to your desired shape (square, oval, etc.) and length.
- Buff (Optional): Use a nail buffer to smooth the surface of your nails.
- Clean Up: Wash your hands to remove any dust or debris.

2. Moisturize:
- Apply cuticle oil around your nails and massage it in. This helps keep your cuticles healthy and can prevent them from drying out.

3. Apply Base Coat:
- Start with a base coat to protect your nails and help the polish adhere better. Apply a thin layer and allow it to dry completely.

4. Apply Nail Polish:
- Shake the Polish: Shake your nail polish gently to mix it well.
- First Coat: Dip the brush into the polish and wipe one side on the bottle neck to remove excess. Start in the center of your nail and apply the polish in three strokes: one down the middle and one on each side.
- Second Coat: Once the first coat is dry (usually a few minutes), apply a second coat for better color and coverage.

5. Clean Up:
- If you get polish on your skin, dip a small brush or a toothpick into nail polish remover and carefully clean up the edges around your nails.

6. Apply Top Coat:
- After your color is dry, apply a top coat to seal in the color and add shine. This also helps your manicure last longer.

7. Let Your Nails Dry:
- Allow your nails to dry completely. This can take about 10-15 minutes for regular polish. Consider using a quick-dry spray or drops if you're in a hurry.

8. Final Touch:
- Once dry, you can apply a little more cuticle oil to your cuticles for added moisture.

### Tips:
- Practice Makes Perfect: If you're new to painting your nails, don't worry if it's not perfect the first time. With practice, you'll improve!
- Use Thin Coats: Applying thin layers of polish helps prevent smudging and allows for quicker drying.
- Experiment: Feel free to try different colors, designs, or nail art once you're comfortable with the basics!

Enjoy your freshly painted nails!
PS C:\Users\Vaanya\ai-text-completion-project>

```

## Reflection:

I think the model performed extremely well and I got to witness the differing tone and depths of the prompts based on the given settings. I think it could benefit a little by becoming more coherent in certain topics like gravity. I think there are many different ways to have gone about gravity especially to a 5 year old. The model does struggle with keeping the outputs dynamic enough to allow it to be within the allocated max\_tokens. Overall, it still had good responses and I learnt a lot from it!