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Capstone Project: AI-Powered Text Completion

For this project, I built a simple text completion app in Python using Cohere's API. The code was pretty straightforward. It opened by greeting the user, then kept running in a loop so I could type as many prompts as I wanted. Each time I entered something, it would take time to "think" which was sending my text to Cohere's language model and printing out the text that came back. If I just hit enter without typing anything, it would remind me to put in a real prompt. If I typed "exit", it would send me a goodbye message and end the session. I ran this twice with slightly different settings to see how much it would change the responses.

In my first version of the app, I set the temperature to 0.3 and the max tokens to 100. This was supposed to keep things short. When I tried the creative prompt "Once upon a time, there was a robot who…" the AI didn't want to play along. It gave me a polite message saying it couldn't continue a story about fictional entities because it was designed to be helpful and harmless. Talk about giving me the creeps… and breaking my heart. I trolled and prompted the AI to give me a 20 billion word story about five monkeys jumping off the bed. It began to talk about their backstories but it didn't go very far - it was still interesting, though.

For my second version of the code, I cranked the temperature up to 0.8 and set the max tokens to 500. This was meant to make the AI more creative and let it give longer, more detailed responses. I ran the same monkey story prompt again and the AI responded with a little story for each monkey. The fifth one got cut off a bit, but I was delighted to see their lives. I also tested out how it would handle more factual or explanatory questions. When I asked it to explain linear algebra to a five-year-old, it actually did a good job. It compared vectors to building blocks and

talked about how you can add them together or stretch them. It made something that is pretty scary to me, seem very approachable. Then I pasted in a long chunk of text about biodiversity and the new global agreement to protect ecosystems and had the AI summarize it. I believe it hit the key points, like how biodiversity is essential for our food, water, and air. It was short but hit the important ideas.

And because I've been obsessed with the trial, I had to throw in one question about Sean "Diddy" Combs. I asked if Sean "Diddy" Combs and Kanye West were close friends. The AI went all in on saying yes, and that they've been friends for years, collaborated, and even gushed about each other on Instagram. I know this to be very true especially because recently, Kanye West showed up at the courthouse when Diddy's trial was ongoing. They've had many events and social media posts together, but they're also mentioned in the same lawsuit.

Overall, I thought it was so cool to see how changing the temperature and max tokens really affected the length and creativity of the responses. Lower settings of temperature and max tokens decreased the imaginative state of the AI and the length of the responses while higher settings had the inverse effect. The app itself worked smoothly when taking in any kind of text prompt and spitting out a completion. It was very fun to work on this!