

Capstone Project Written Report

<i>Prompt</i>	<i>Explain AWS Config in a step-by-step process using a pickleball analogy.</i>	<i>Continue this story: '9am. I just brushed my teeth, and am now getting ready for the day!'</i>	<i>What is 2 + 2?'</i>	<i>Continue this story: 'I am a recent CS graduate who is interested in tech. Skilled in React, Spring, MongoDB, PostgreSQL, and AWS.''</i>	Summarize the following prompt: Response #3 (Check it below)
<i>Settings</i>	model ='command', prompt =prompt, max_tokens =600, temperature =0.7, k =0, stop_sequences =[], return_likelihooods ='NONE'	model ='command', prompt =prompt, max_tokens =600, temperature =0.8, k =0, stop_sequences =[], return_likelihooods ='NONE'	model ='command', prompt =prompt, max_tokens =600, temperature =0.3, k =0, stop_sequences =[], return_likelihooods ='NONE'	model ='command', prompt =prompt, max_tokens =600, temperature =0.8, k =0, stop_sequences =[], return_likelihooods ='NONE'	model ='command', prompt =prompt, max_tokens =600, temperature =0.8, k =0, stop_sequences =[], return_likelihooods ='NONE'

<i>Response</i>	Response #1 (In the following page)	Response #2 (In the following page)	This is a straightforward math problem. $2 + 2 = 4$ is the mathematical sum of two addends, two, and two, yielding a total of four.	Response #3	Response #4

Notes:

- **Prompt 1:** The response seems very coherent and creative with respect to the analogy, without having inaccuracies. As I dropped the temperature from 0.8 to 0.7, the response became a little bit more factual rather than creative to the analogy.
- **Prompt 2:** This was a well-fabricated and understandable response, having no logic flaws within the situation. The temperature regulates creativity, and since the temperature was pretty high, that's why the response seemed really creative.
- **Prompt 3:** The response had no inaccuracies again, meaning the model was very-well trained. However, having a temperature of 0.3 made the response too factual.
- **Prompt 4:** The model used this prompt to generate a creative story convincing a recruiter from a company to hire me for a job. Having up to 600 output tokens for a single prompt puts less overload on the model.
- **Prompt 5:** This provided a condense and proper summary of the previous response, still maintaining proper creativity.

Response #1:

AWS Config is a service that enables you to assess, audit, and evaluate the configurations of your AWS resources. It is a powerful tool for controlling and governing how AWS resources are configured and operated, aiding in compliance, troubleshooting, and enhancing overall security.

Below is a step-by-step explanation of AWS Config using an analogy about picking up balls on a pickleball court:

- Setting Up AWS Config resembles preparing a pickleball court with a bucket of balls ready to be picked up. Just as you lay out the court, grab the paddle, and place the bucket of balls on one end, you initiate AWS Config in your AWS account. This involves navigating the AWS Management Console or CLI to turn on AWS Config service and any necessary rules to monitor resources.
- Defining Rules similar to setting specific rules for picking up balls from the court. With AWS Config, you establish rules (called Configuration Items or CI) to define the desired configuration state for your resources. Just as you decide, "I'll pick up balls only under the net," you could set a rule in AWS Config stating, "All S3 buckets must have versioning enabled."
- **Continuous Resource Evaluation** is akin to continually picking up balls as they scatter across the court during a lively pickleball game. AWS Config monitors your resources continuously. Whenever a resource's configuration changes, it evaluates it against the rules you've set. Just as you spontaneously pick up any stray balls, AWS Config identifies any resources that deviate from the defined configuration rules.

- **Receiving Notifications of Changes** resembles hearing the gentle sound of a pickleball hitting a paddle, signaling a ball has been picked up. AWS Config employs notifications (via Amazon Simple Notification Service, or SNS) to alert you when resources deviate from configured rules. Just as you hear the ball being picked up, AWS Config notifies you when a resource is not adhering to your specified configuration, allowing you to take appropriate action.
- **Organizing Compliance and Security Analogy:** Organizing a tidy and controlled pickleball game is similar to how AWS Config aids in maintaining an organized and secure cloud environment. By defining rules and continuously monitoring resource configurations, you ensure only approved configurations are deployed, helping maintain security and compliance with policies.
- **Remediating Issues:** Taking Action to rectify any problematic configurations before they disrupt the game is analogous to how AWS Config assists in troubleshooting and resolving issues. With its ongoing evaluation of resources, you can identify and rectify any resources that deviate from the desired configuration, ensuring a smooth-running pickleball game or cloud environment.

In essence, AWS Config serves as an attentive referee, constantly monitoring your resources, and guiding you to any apparent configuration rules deviations, thereby helping you maintain a secure and compliant cloud environment, just as you would ensure a fun and orderly pickleball game.

Response #2:

10am. You're out the door, on your way to work but your car won't start, it's been acting up for the past few days. You were supposed to get a ride to work but someone canceled on you at the last minute. Luckily, you have a subscription to a car sharing service and you call them, frustrated, to ask if there's a possibility of getting a car delivered faster, because you're already running late. The customer service rep tells you they'll do their best and you kill time at a nearby coffee shop, trying not to get too frustrated or worried about being late.

You get a text from the car sharing service saying your car is being processed and will be dropped off at your location within 20 minutes! You send a text to your boss, letting them know you've been delayed due to car issues but you're on your way. Luckily, your boss understands and lets you know they're fine with you working late to make up for it.

You get to the car, start it and begin your day. At 3pm you remember you still need to call the mechanic to come and pick up your broken down car. Hopefully it'll be fixed by tomorrow!

Response #3:

I am a recent Computer Science graduate with a passion for leveraging technology to solve complex problems. My skill set is robust and includes expertise in front-end development with React, back-end development with Spring, and database management with MongoDB and

PostgreSQL. Additionally, my experience with Amazon Web Services (AWS) has equipped me with a strong foundation in cloud computing and infrastructure management.

During my studies, I actively sought out opportunities to apply my skills and expand my knowledge. I took part in several coding competitions and workshops, where I had the chance to work on a variety of projects and learn from experienced developers. These opportunities allowed me to develop a strong understanding of the software development lifecycle, honing my skills in collaboration, communication, and agile methodologies.

My interest in technology extends beyond the classroom. I stay up-to-date on industry trends and emerging technologies by regularly attending conferences and workshops. I am particularly drawn to the advancements in cloud computing, artificial intelligence, and blockchain technologies and their potential to revolutionize the way we interact with technology.

I am confident that my technical skills, combined with my relentless curiosity and dedication to learning, make me a strong candidate for a Junior Developer position at your company. I am eager to put my knowledge and skills to work, learn from your talented team, and contribute to creating innovative solutions. Let me know if you have any opportunities available!

Response #4:

That's great to hear! Staying up-to-date with industry trends is crucial for keeping abreast of new opportunities and innovations. Could you share some specific examples of how these technologies are impacting your field of interest? Also, do you have any predictions for where some of these technologies may be heading in the future?

Reflect on Limitations

- The model performs well when there is the right amount of creativity that the prompt's expected response requires, regulated by temperature.
- This model struggles with developing frontend related tasks.
- I want to fine-tune the model in the near future but also display the output in a pop-up window for better display.