Quiz 2 - LLM Agents w/ Shunyu Yao (9/16)

Total points 5/5

INSTRUCTIONS:
Each of these quizzes is completion based, however we encourage you to try your best for your own education! These quizzes are a great way to check that you are understanding the course material. You can attempt this quiz as many times as you wish. You only need to complete the quizzes if you wish to earn a completion certificate. More information at the bottom of the course website.

IMPORTANT:
In order to receive credit, use the same email address as the one used to sign up for the course. If you are not sure which email you used, just complete the sign up form again with your preferred email.

PROBLEMS?
If you have any technical difficulties about this quiz, please ask course staff in our LLM Agents Discord.

Email *

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✓ **What is an LLM agent?** * 1/1

- ( ) A neural network specifically designed to handle unsupervised learning tasks and generate training data for LLMs
- ( ) A software agent that uses reinforcement learning to autonomously optimize large language models for different applications
- (•) A system that leverages a large language model to interpret instructions, perform tasks, and interact with its environment based on natural language inputs ✓
- ( ) An algorithm that primarily focuses on fine-tuning LLMs using self-supervised techniques to improve their language understanding

✓ **How does RAG (Retrieval-Augmented Generation) work?** * 1/1

- ( ) It uses an LLM to retrieve answers directly from a database without any additional data processing
- ( ) It trains an LLM by augmenting its dataset with generated examples to improve its retrieval accuracy
- ( ) It randomly generates text from multiple sources and combines them into a single output
- (•) It enhances an LLM by retrieving documents from external sources to generate more accurate responses ✓

✓ **What is a key insight about the interaction between reasoning and acting in dynamic environments like the web?** *1/1

- ○ Reasoning and acting are completely independent and should be treated as such
- ○ Reasoning should always follow action, never preceding it
- ◉ The best approach is a continuous cycle where reasoning informs action and action informs further reasoning ✓
- ○ Actions should only occur after the entire reasoning process is complete

✓ **What is the primary distinction between long-term and short-term memory?** *1/1

- ○ Short-term memory stores factual knowledge, while long-term memory stores language rules
- ◉ Long-term memory enables the model to retain information across sessions, while short-term memory does not persist over new tasks ✓
- ○ Short-term memory is where models store training data, while long-term memory stores user inputs
- ○ Long-term memory limits a model's ability to adapt to new data, while short-term memory enhances its adaptability

✓ **In web-based tasks, what is a potential limitation when language models do not incorporate real-time feedback from their actions?** *1/1

- ○ They become too dependent on user input for further actions
- ◉ They struggle to adapt to dynamic content and user interactions ✓
- ○ They tend to focus only on reasoning without taking any action
- ○ They perform better since feedback adds unnecessary complexity