

Quiz 5 - Compound AI Systems w/ Omar Khattab (10/7)

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 are compound AI systems? ***

1/1

- ☒ A combination of multiple AI models and components working together to perform complex tasks ✓
- ☐ A system where AI models operate in isolation without any collaboration
- ☐ A method for reducing model size to improve computational efficiency
- ☐ A traditional LLM architecture that relies solely on pre-trained models to perform specific tasks



✓ **Why is it better to use compound AI systems compared to traditional monolithic AI models?** *1/1

- ☐ Compound AI systems rely solely on large, pre-trained models, improving performance without iteration
- ☐ Compound AI systems can rely on multiple large models to avoid the need for optimization during inference
- ☐ Compound AI systems are more adaptable and versatile compared to monolithic AI systems
- ☒ Compound AI systems enable more reliable composition of capabilities, transparency, and efficient use of smaller models ✓

✓ **What is DSPy, and why is it significant in AI development?** * 1/1

- ☐ DSPy is a tool for developing monolithic AI models that do not require customization
- ☒ DSPy is a framework that enables the customization and combination of AI systems, improving control, transparency, and efficiency ✓
- ☐ DSPy is a language model that focuses exclusively on generating human-like text without any external tool integration
- ☐ DSPy is a platform that restricts the use of smaller models to ensure consistency in output



✓ Which of the following best explains the difference between Coordinate-Ascent OPRO and Multi-prompt Instruction Proposal Optimizer (MIPRO)? *1/1

- ☒ Coordinate-Ascent OPRO iteratively improves instruction proposals by refining them step-by-step, whereas Multi-prompt Instruction Proposal Optimizer generates and evaluates multiple prompts simultaneously to find the best one ✓
- ☐ Multi-prompt Instruction Proposal Optimizer focuses on adjusting individual parameters, while Coordinate-Ascent OPRO optimizes overall model architecture
- ☐ Coordinate-Ascent OPRO and Multi-prompt Instruction Proposal Optimizer both rely on a fixed set of prompts for consistent outputs
- ☐ Coordinate-Ascent OPRO relies on a single prompt to guide model behavior, while Multi-prompt Instruction Proposal Optimizer uses multiple models for better scaling

✓ How does the speaker describe “Natural Language Programming”? * 1/1

- ☐ A great method that involves writing programs exclusively for natural language assistants
- ☒ As a way to create high-level, declarative programs that enhance accuracy, control, and efficiency in working with language models through tools like DSPy ✓
- ☐ As a tool that restricts programming to predefined commands and functions to ensure accuracy
- ☐ As a technique that combines natural language processing with visual programming interfaces to enhance user interaction

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