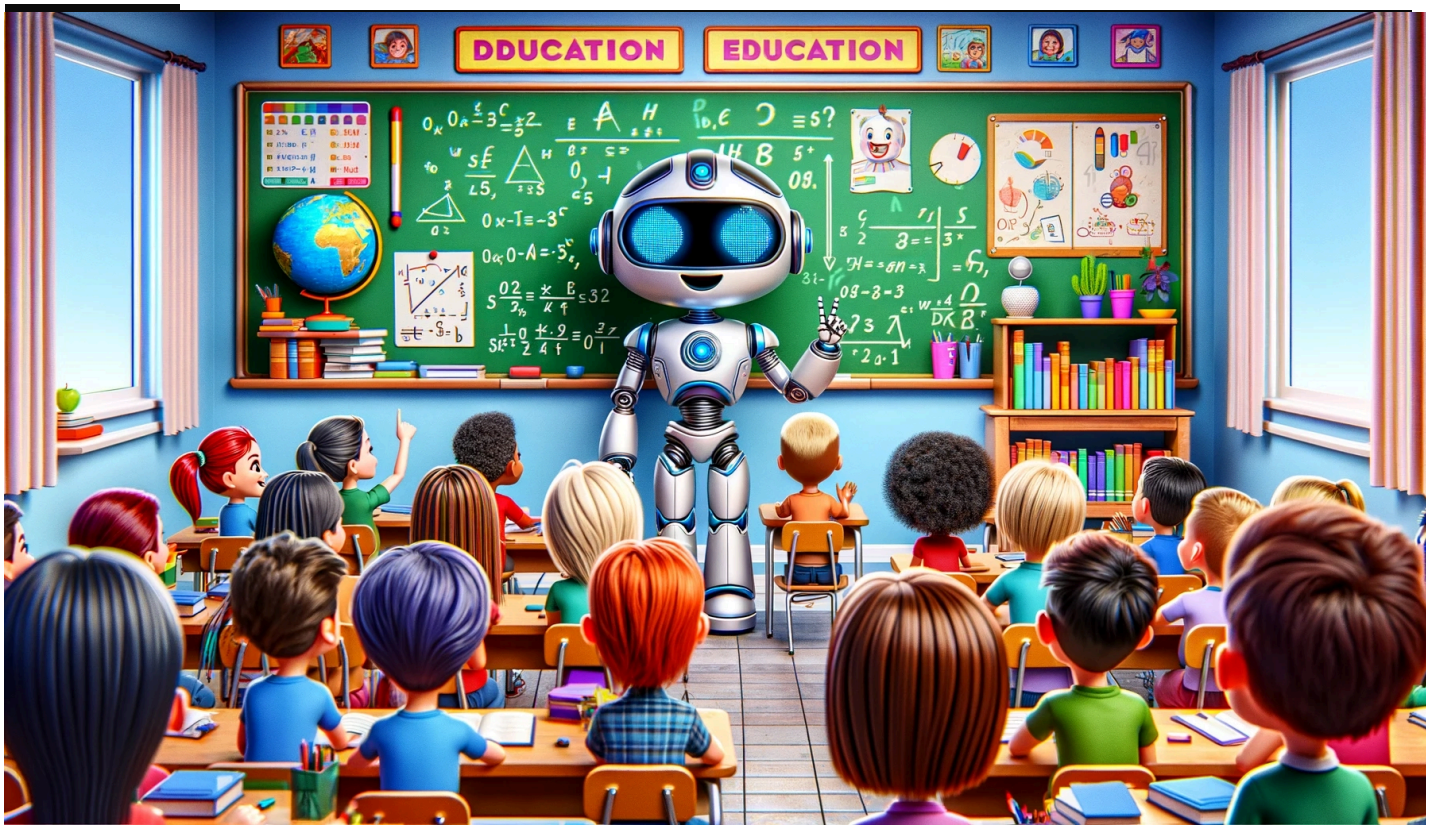
Exercise: Educational Startup Scenario

Lesson Downloads



In this exercise, you will pretend you have joined a new company that is building a new educational platform. You want to match students with class offerings. You decide that using LLMs will help you prototype and ship new features quickly, so you first test your ideas using a commercial LLM.

To this end, you've conducted a quick survey of a few students with their favorite classes. You also have a list of some of the classes for the next term

Students

Name	Major	Year of Student	Favorite Class
Emily Thompson	Computer Science	Sophomore	Algorithms 101
Jacob Martinez	Mechanical Engineering	Junior	Thermodynamics
Aisha Khan	English Literature	Senior	Romantic Poets
Lucas de Oliveira	Biology	Freshman	Molecular Biology
Sophia Liu	Business Administration	Sophomore	Marketing Principles
Raj Patel	Physics	Senior	Quantum Mechanics
Mia Williams	Art History	Junior	Renaissance Art
Diego Ramirez	Political Science	Freshman	Global Politics
Hana Kim	Psychology	Junior	Cognitive Psychology
Ahmed El-Sayed	Chemistry	Senior	Organic Chemistry

Classes

Class Name	Description
Galactic Anthropology 101	An exploration of hypothetical cultures and civilizations across the universe.
Time Travel Theories	Dive into the physics, paradoxes, and philosophical debates surrounding the possibility of time travel.
Underwater Basket Weaving	Learn the ancient and calming art of weaving baskets, all while submerged in water.
Advanced Potion Making	A chemistry-infused course on the creation of magical elixirs and brews.
Dino-Bot Engineering	Design and simulate robotic dinosaurs using cutting-edge software.
Quantum Culinary Arts	A journey into the subatomic principles of food, blending physics and gastronomy.

Class Name	Description
Alien Linguistics	Study the hypothetical languages of extraterrestrial beings and their potential grammatical structures.
Historical Fiction Writing	Craft compelling narratives set in bygone eras, blending fact with fiction.
Music of the Elves	Delve deep into the enchanting melodies of elvish cultures, their instruments, and their historical significance.
Virtual Reality Philosophy	Examine the ethical and philosophical implications of virtual worlds and their impact on human cognition.

How to ask an LLM

How might you design a prompt that contains the information from above as well as a question or instruction that will give you the best chance of matching students with classes they will enjoy? Note that commercial LLMs can sometimes read Markdown tables directly, so a prompt that asks what Aisha Khan's major was might look like this:

```
### Students

| Name                | Major                          | Year of Student | Favorite
```

```
|------------------|---------------------------|----------------|----------
| Emily Thompson   | Computer Science          | Sophomore      | Algorithm
| Jacob Martinez   | Mechanical Engineering    | Junior         | Thermodyn
| Aisha Khan       | English Literature        | Senior         | Romantic
| Lucas de Oliveira | Biology                  | Freshman       | Molecular
| Sophia Liu       | Business Administration   | Sophomore      | Marketing
| Raj Patel        | Physics                   | Senior         | Quantum M
| Mia Williams     | Art History               | Junior         | Renaissan
| Diego Ramirez    | Political Science         | Freshman       | Global Po
| Hana Kim         | Psychology                | Junior         | Cognitive
| Ahmed El-Sayed   | Chemistry                 | Senior         | Organic C


### QUESTION
What is Aisha Khan's major?
```

Now, copy and paste this prompt into a commercial LLM's web interface and see what it generates. Does it generate the correct answer?

Reflection
Copy and paste this prompt into a commercial LLM's web interface and see what it generates. Does it generate the correct answer? What do you think is happening behind the scenes?

Enter your response here, there's no right or wrong answer

Submit

Now it's your turn!
Let's write a prompt to match students with classes. Here are both tables in Markdown format for your convenience:

```
### Students

| Name             | Major                     | Year of Student | Favorite
|------------------|---------------------------|----------------|----------
| Emily Thompson   | Computer Science          | Sophomore      | Algorithm
| Jacob Martinez   | Mechanical Engineering    | Junior         | Thermodyn
| Aisha Khan       | English Literature        | Senior         | Romantic
| Lucas de Oliveira | Biology                  | Freshman       | Molecular
| Sophia Liu       | Business Administration   | Sophomore      | Marketing
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| Diego Ramirez | Political Science | Freshman | **Global** Po
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Classes

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Music **of** the Elves	Delve deep **into** the enchanting melodies **of** elvi
Virtual Reality Philosophy	Examine the ethical and philosophical implicati

Let's work on your prompt
How will we match students with classes? Feel free to use the box below or another text editor to format your answer. When you think you have a solution, copy and paste it into an LLM and see the results!

Enter your response here, there's no right or wrong answer

Submit

Food for thought
Putting applications supported by Large Language Models into production can be difficult. Not only must you ensure that the answers are acceptable for your use case, but you also need to make sure your system scales in the way you need it to. Consider the following free-response questions.

Will your solution scale to more students and more classes?
Do you think your solution will scale to more students and more classes? Why or why not? Think a few minutes here, and feel free to use the box below to record your thoughts. Be sure to think about specifics that apply to your hypothetical situation, such as the type and size of the educational institution you are starting.

Enter your response here, there's no right or wrong answer

Submit

How can you scale to one student and many classes...
What are ways you can scale your solution to a system that matches a single student with a list of thousands of classes, for instance, as a recommendation system integrated into a course catalog?

Enter your response here, there's no right or wrong answer

Submit