today's learning targets

Students will be able to:

- Define **token** and explain the importance of tokens in LLMs.
- Explain how LLMs produce human-sounding text.
- Explain concerns about hallucinations in LLMs.

intro

Large language models predict the next **token** in a sentence.

Tokens			Not tokens		
very	rain	ing	running	P	the car
!	[space]	the	She was our team captain.		

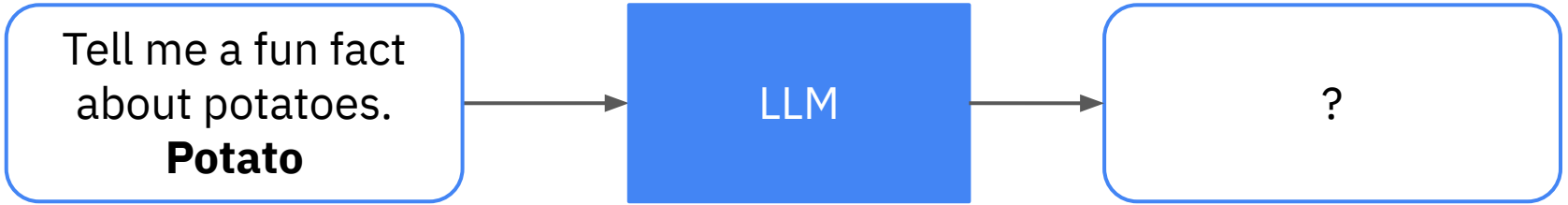
Token: A piece of a sentence that contains meaning. It can be a word, part of a word, or a punctuation mark.

act out an LLM

Together, we will act out the process of an LLM generating a sentence.

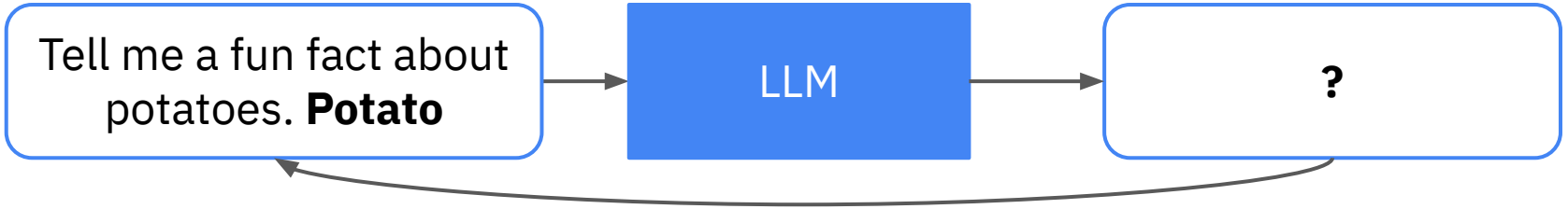
Step 1: We feed the prompt to the LLM. It generates the first token of the response.

Step 2: The prompt plus the first generated token go back into the LLM.



act out an LLM

Vote! Which token should be generated next?



A	America	and	are	part	potato	root	staple
as	Asia	crop	first	starch	the	to	were
food	for	grown	it	-s	-es	-ing	-y

act out an LLM

Text we generated: Potato_____

- Is there a way to know if the sentence we produced was correct?

Hallucination: An incorrect piece of text generated by an LLM.

references

This activity is adapted from part of Melanie Mitchell's talk, The Future of Artificial Intelligence (21:57-23:16).

https://www.youtube.com/watch?v=HAiXT1mGTXc&t=313s