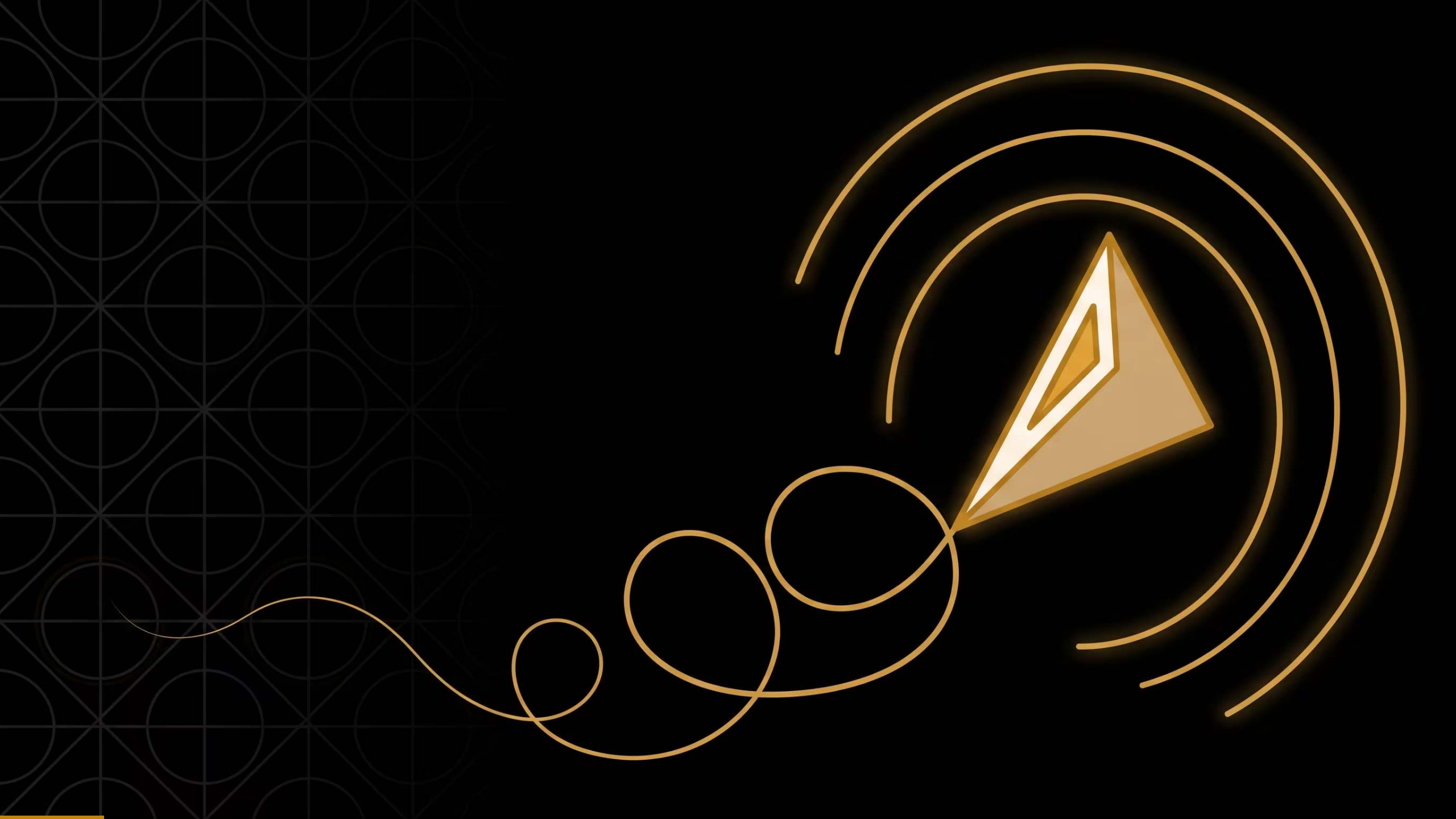


An illustration of an open book with a network of glowing nodes and lines emerging from it, set against a dark background with a grid of circles. The book is open, showing two pages with horizontal lines representing text. From the pages, a dense cloud of small, glowing nodes (circles and squares) emerges, connected by thin, glowing lines. The background is dark with a grid of light gray circles.

Demystifying large language models







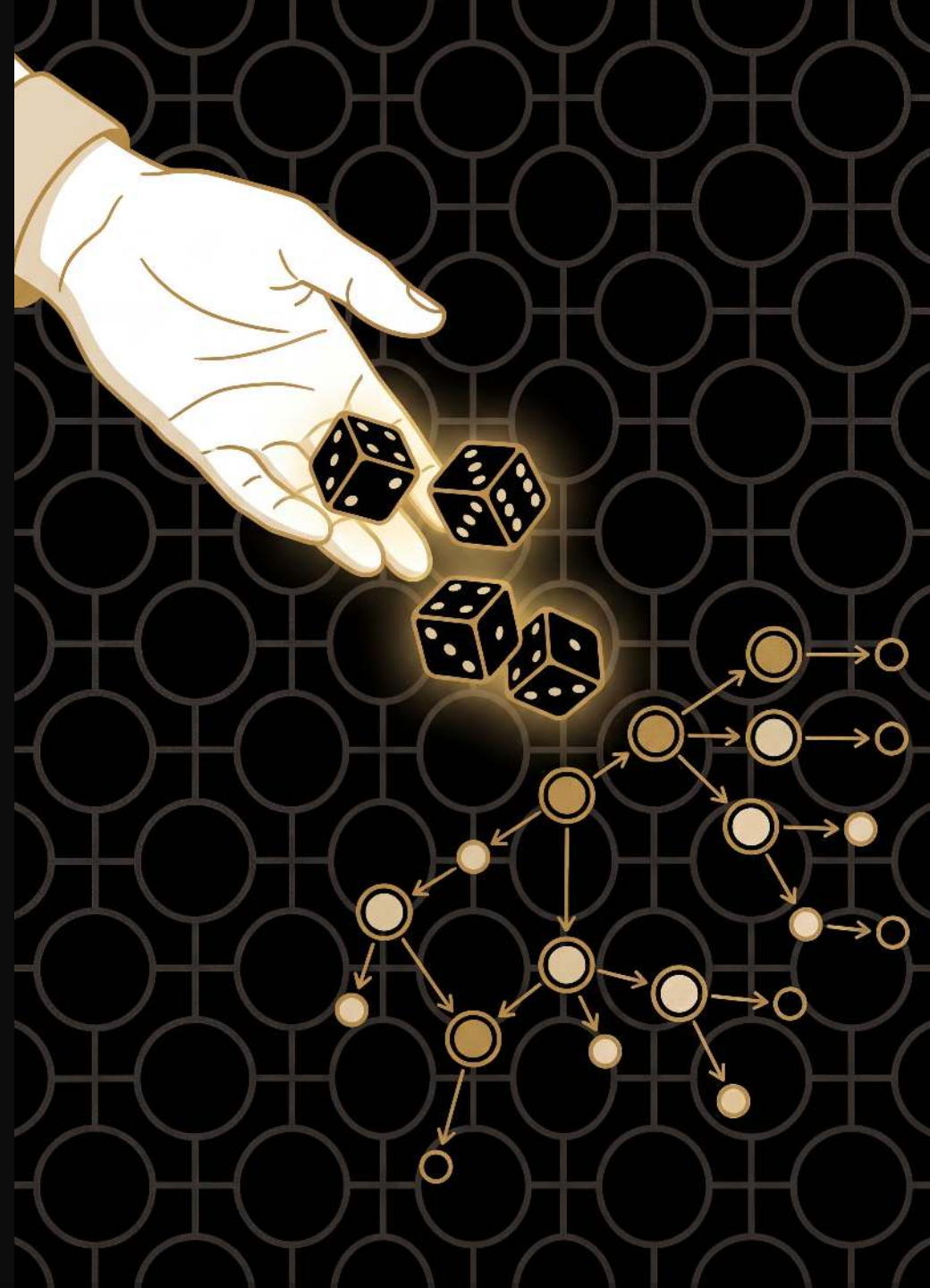
it's hard to have an opinion
on a machine you've never seen **inside**



a page of **token pairs** —
a word, and the word before it

the algorithm

1. I **call out** the last token we wrote (and its colour)
2. **hands up** if it's the *boxed* token on your page
3. I **pick a hand at random** — you read out the token beside it
4. I **write it down**, and we go again





4:00

start

reset

+1

-1



we just ran a language model

what role did you play?

each word on your sheet → a **token**

the pairs on your page → the **parameters** of the model

the hands in the air → the **probability distribution** over next tokens

my random pick → **sampling**

the sentence I wrote → **generation**





the sentence we wrote is in no book

three books

three books

“He was an old man who fished
alone in a skiff in the Gulf Stream.”

— *Ernest Hemingway, The Old Man and the Sea (1952)*

three books

“He was an old man who fished
alone in a skiff in the Gulf Stream.”

— *Ernest Hemingway, The Old Man and the Sea (1952)*

“TRUE! nervous, very, very dreadfully
nervous I had been and am.”

— *Edgar Allan Poe, The Tell-Tale Heart (1843)*

three books

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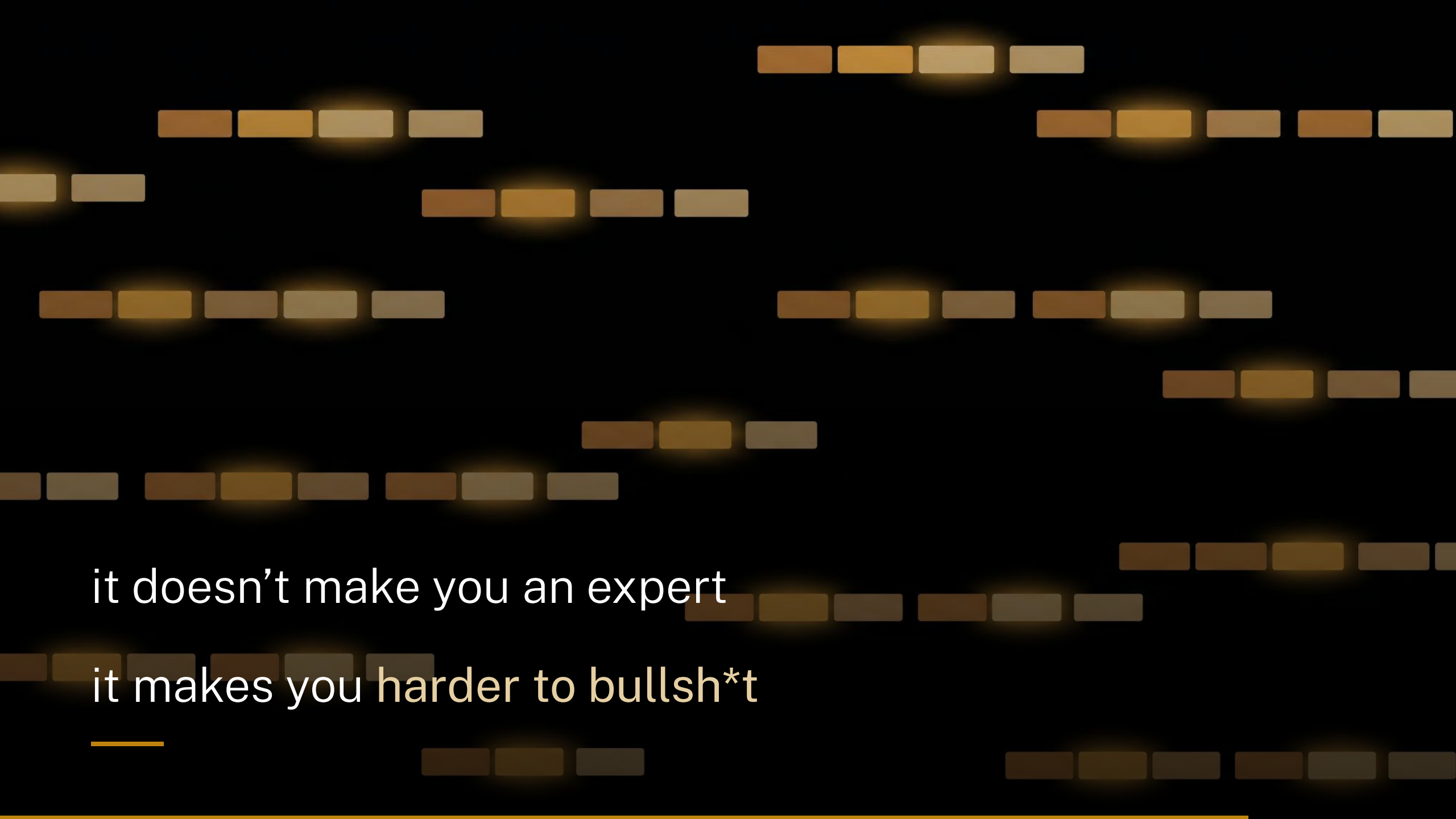
— *Edgar Allan Poe, The Tell-Tale Heart (1843)*

“The sun did not shine. It was too wet to play.”

— *Dr. Seuss, The Cat in the Hat (1957)*



a hall full of people just did
the thing you're told needs a data centre



it doesn't make you an expert

it makes you harder to bullsh*t



llmsunplugged.org/talks/demystifying-large-language-models/



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