

LLMs Unplugged

How AI writes stories

Speaker notes

Open warm: today we'll find out how AI writes stories, and build our own with paper. No computers.

Acknowledgement of Country



Speaker notes

Acknowledge the Traditional Custodians of the land you’re meeting on, and pay respects to Elders past and present. Keep it brief and sincere; say it in your own words.

What is AI?



Think → pair → share

when you hear the words **artificial intelligence**, what comes to mind?

think on your own, then share with the person next to you



Speaker notes

2 min. Then a quick crowd unpack: does anyone know what AI stands for? What have you talked about in class? Has anyone tried using it — what for?

Let’s ask one to write us a story

we need **three words or ideas** — hands up!

TEACHER

WORD 1

WORD 2

WORD 3

Copy prompt

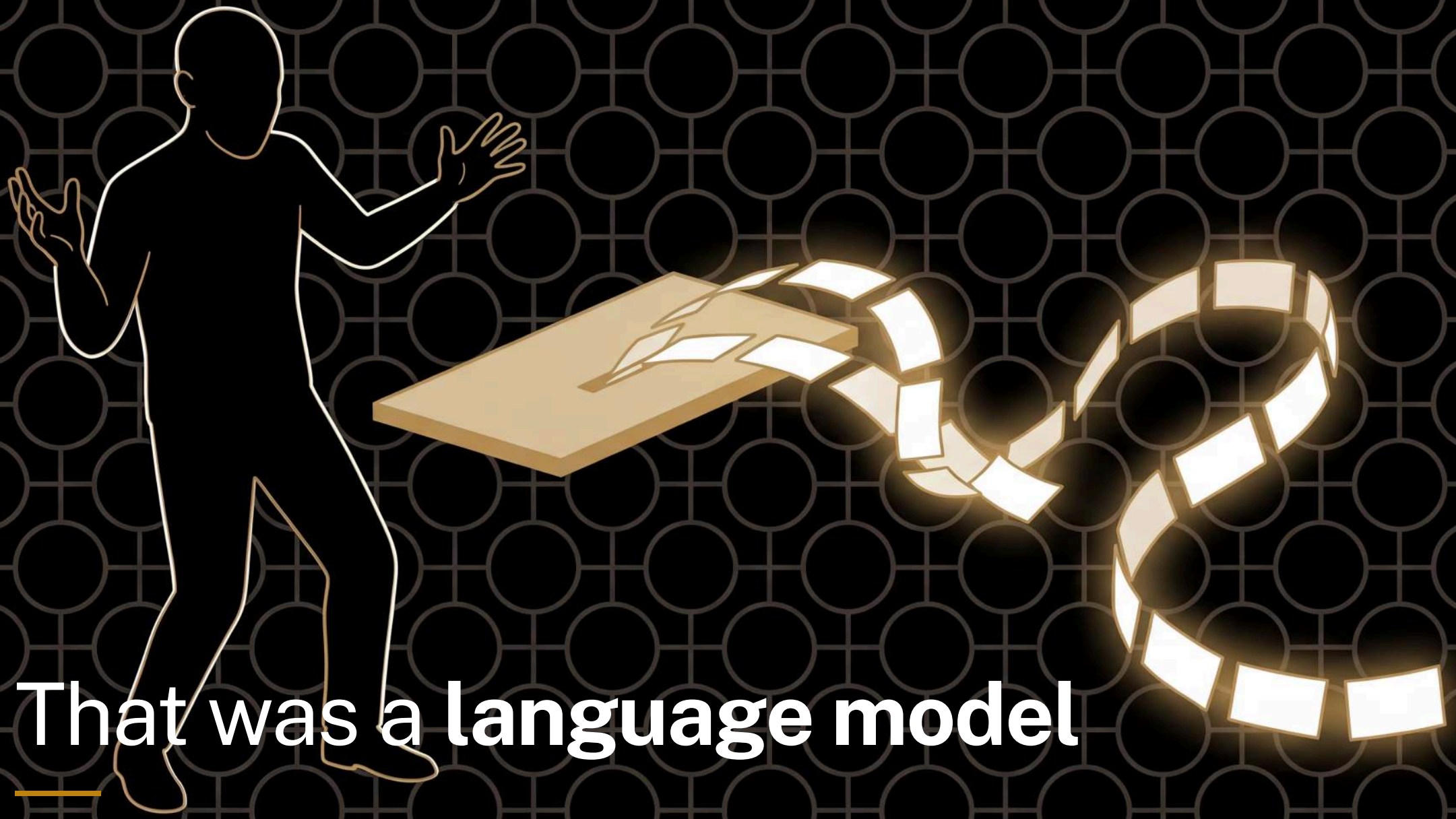


Speaker notes

Collect three words from the class — hands up, choose a few — and write them on the board so everyone can see.

Type your name and the three words into the boxes on this slide, hit “Copy prompt”, then alt-tab to ChatGPT and paste. Year 5 and Canberra are baked into the prompt — edit STORY_PROMPT in how-ai-writes-stories.deck.mdx if this delivery differs.

Read the result back dramatically.



That was a **language model**

What just happened?

no person on the other side wrote that story for us

the **language model** learned patterns from huge amounts of text, then copied those patterns to make something new

today we'll build our own language models — **without a computer**



Speaker notes

Reinforce: whether or not you use AI, understanding how it works helps you make better choices about when to use it.

Predict the next word

we humans are good at spotting patterns

I’ll start a sentence — hands up if you know the next word



Speaker notes

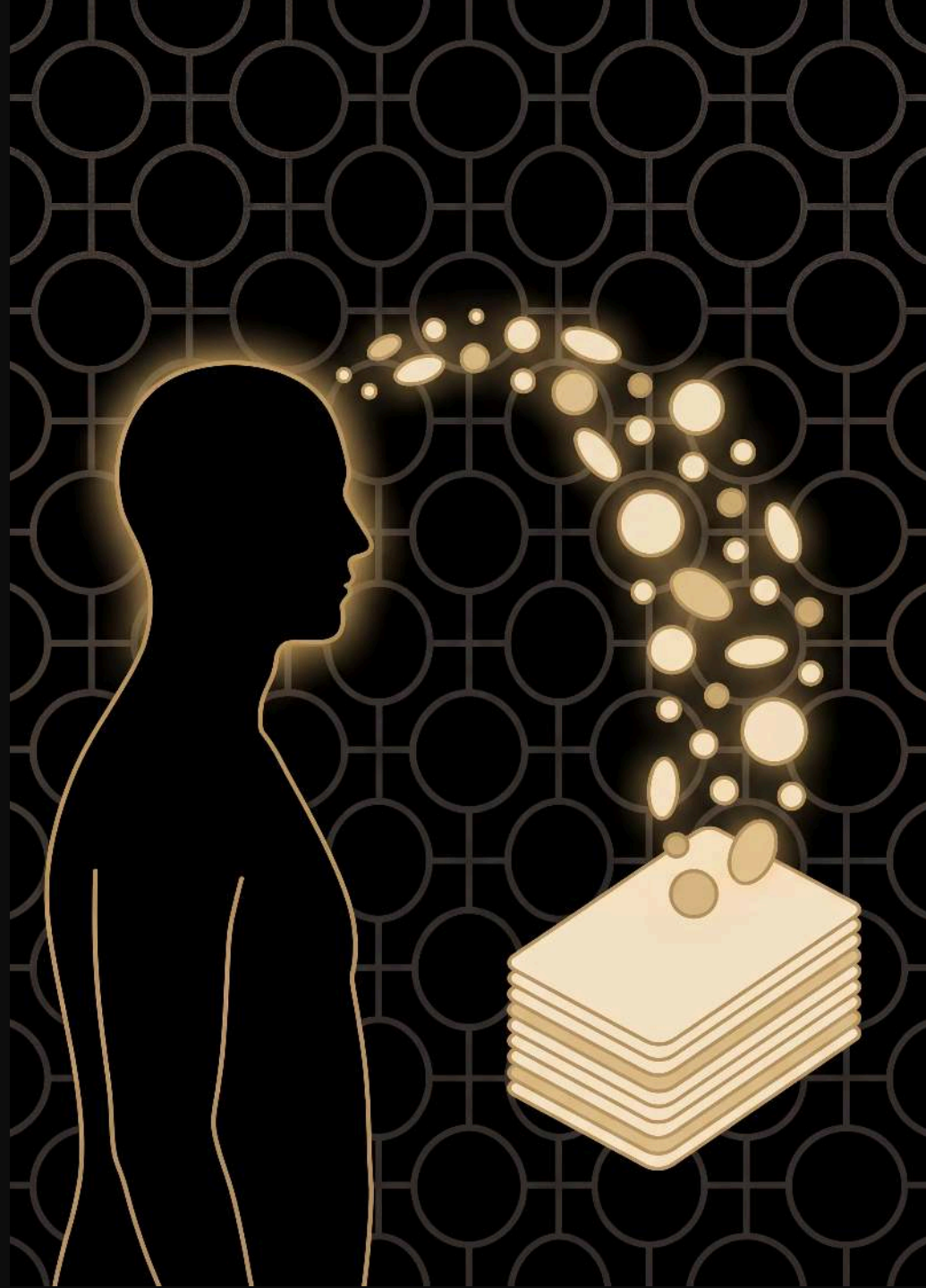
Do a few of these live on the whiteboard, pausing for hands before the last word:

- “be respectful, be responsible, be ______” (swap in this school’s actual values if known)
- “yer a wizard, ______!”
- “I don’t eat chocolate, so at Easter I go hunting for ______”

So how do we teach a model?

humans pick up patterns from listening, reading, watching

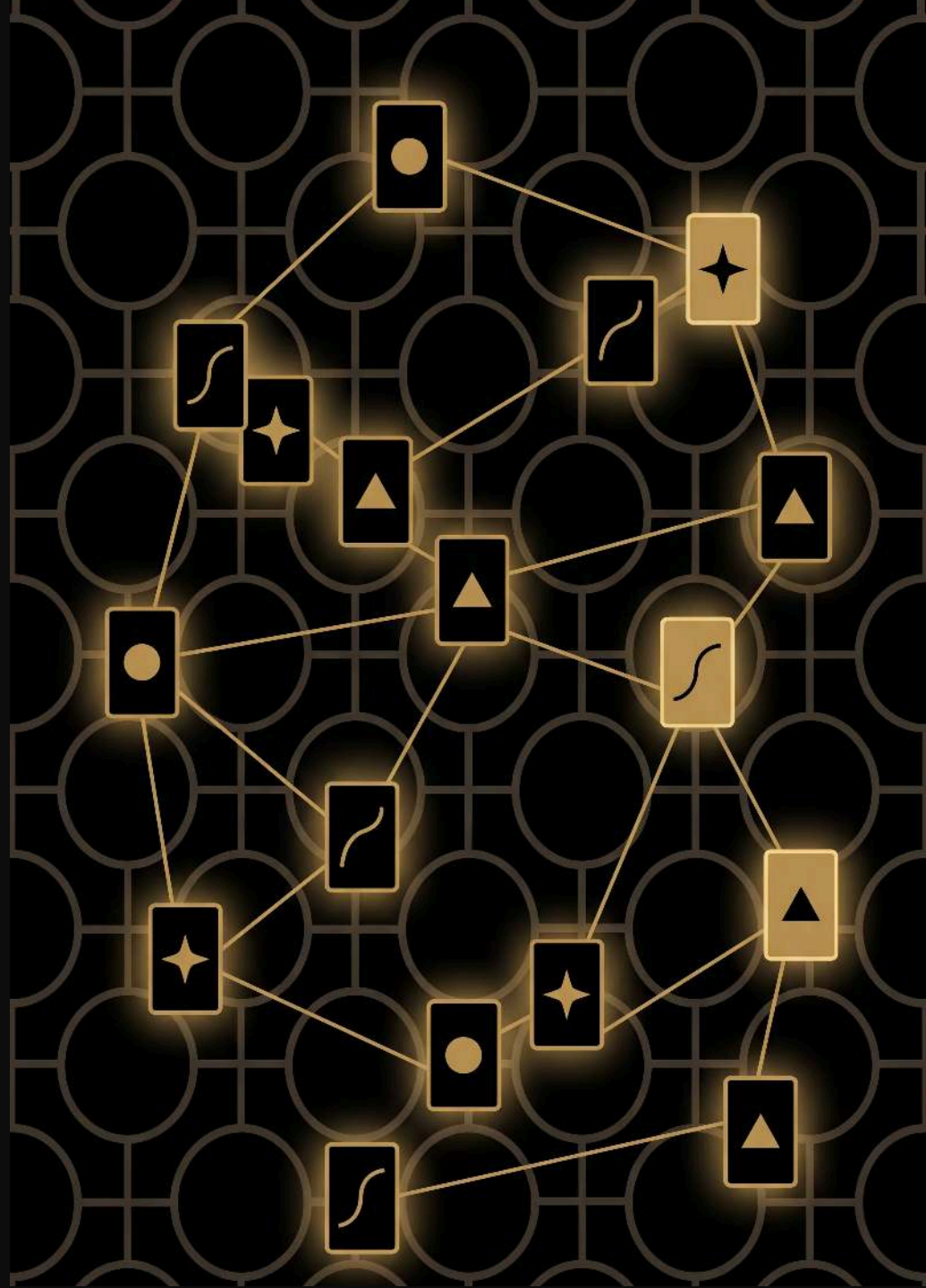
a language model has to learn them from **text**



Speaker notes

Bridge straight into the cutouts mechanic on the next slides.

Some words we'll use

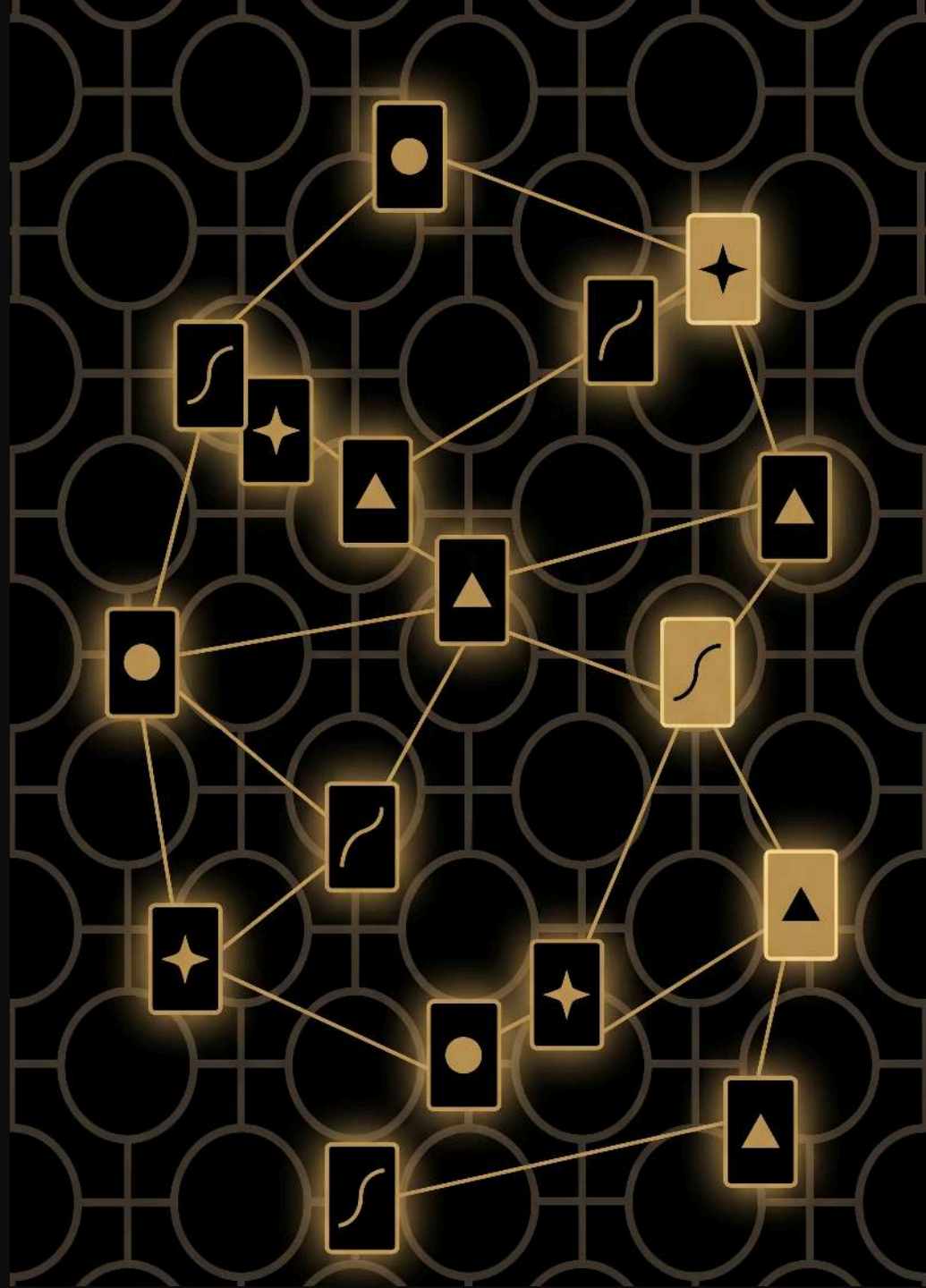


Speaker notes

Four words we'll lean on all workshop — reveal them one at a time and tie each back to what they've already seen: AI wrote our story; a language model predicted the next word; we'll train ours by spotting patterns; the kids' book is our training data.

Some words we'll use

artificial intelligence (AI) — technology that mimics some human abilities, like writing stories or answering questions



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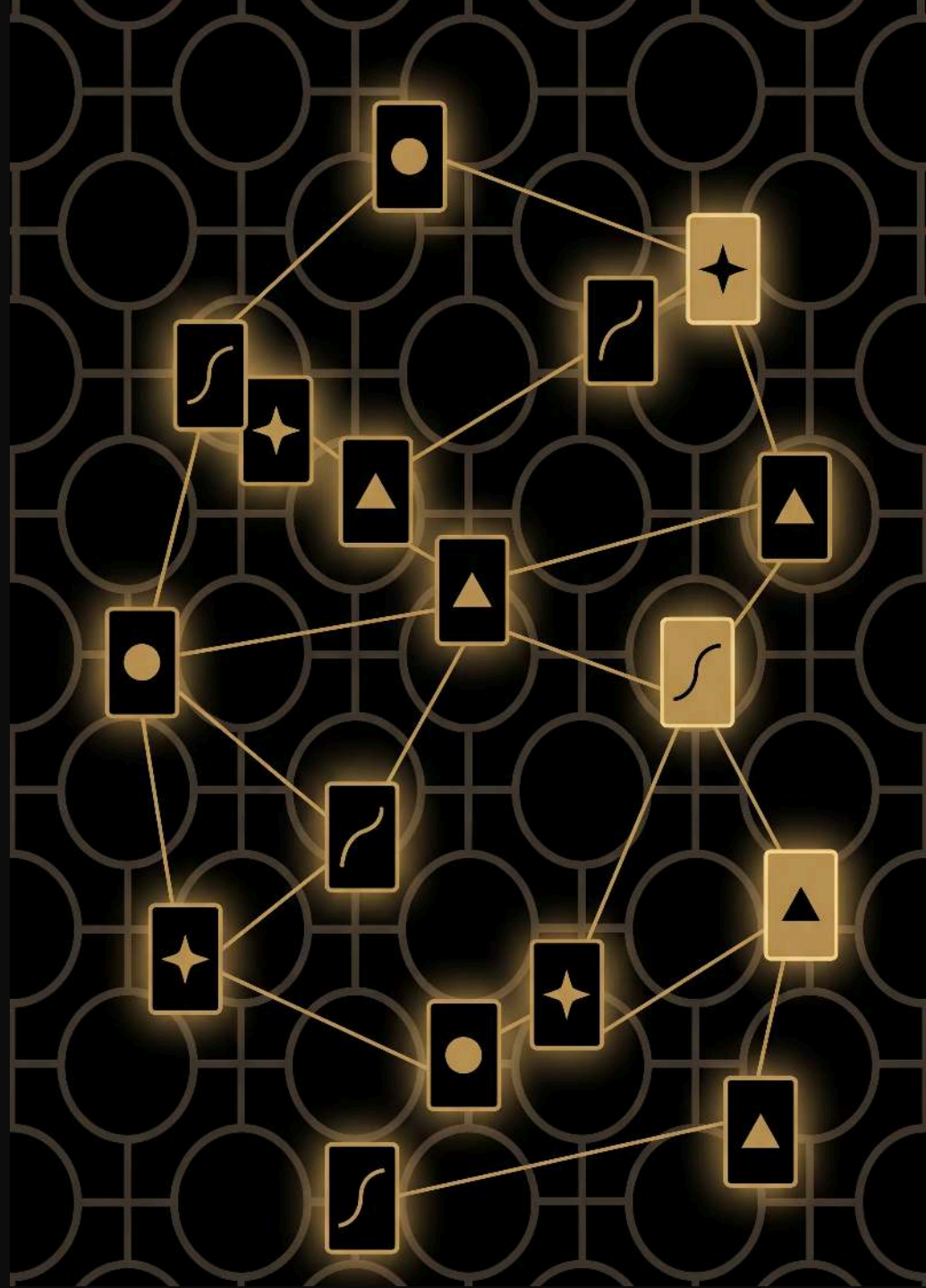
language model — a system that predicts what word comes next, using patterns it learned from text



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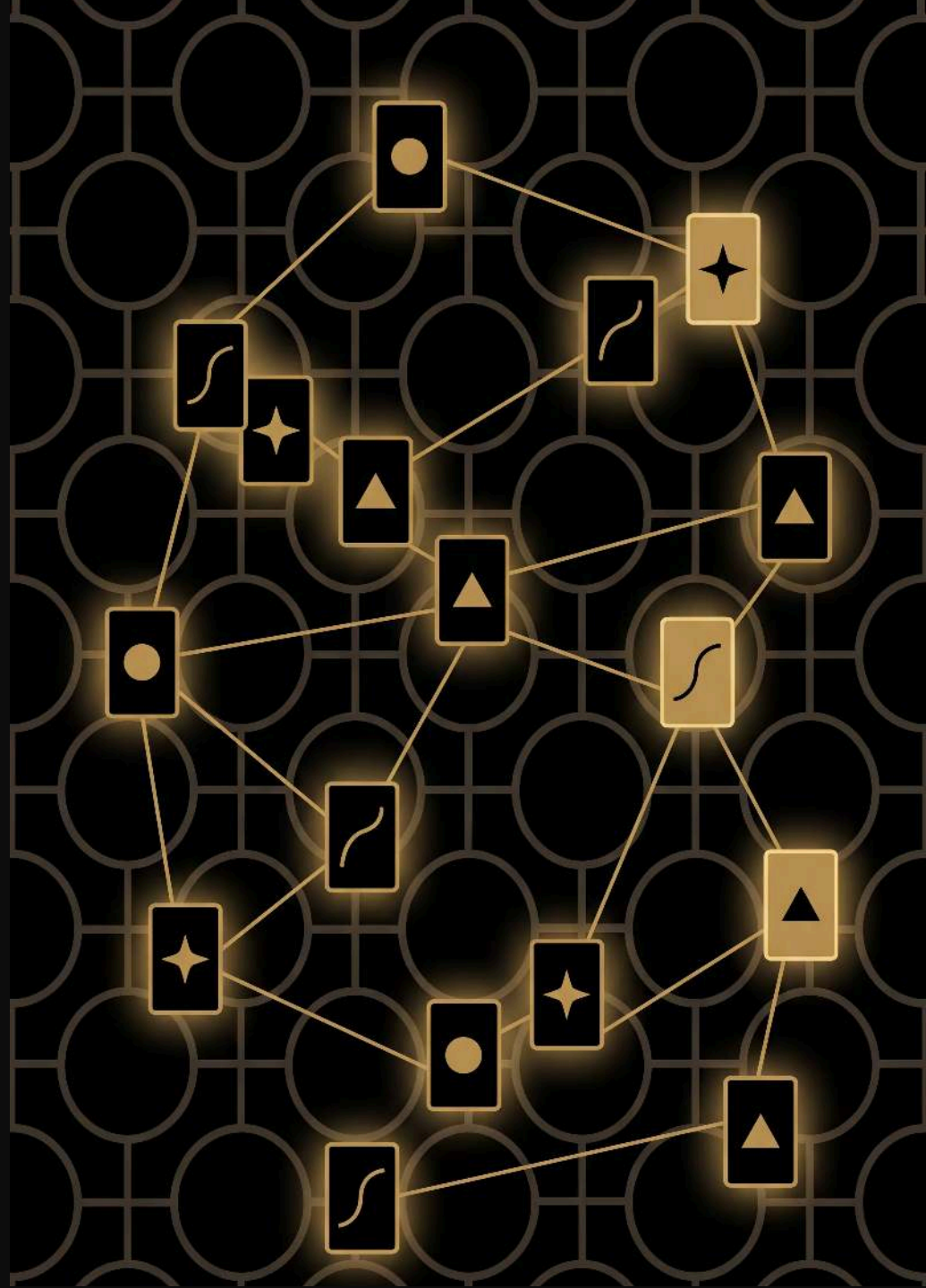
training — building a model by finding patterns in text



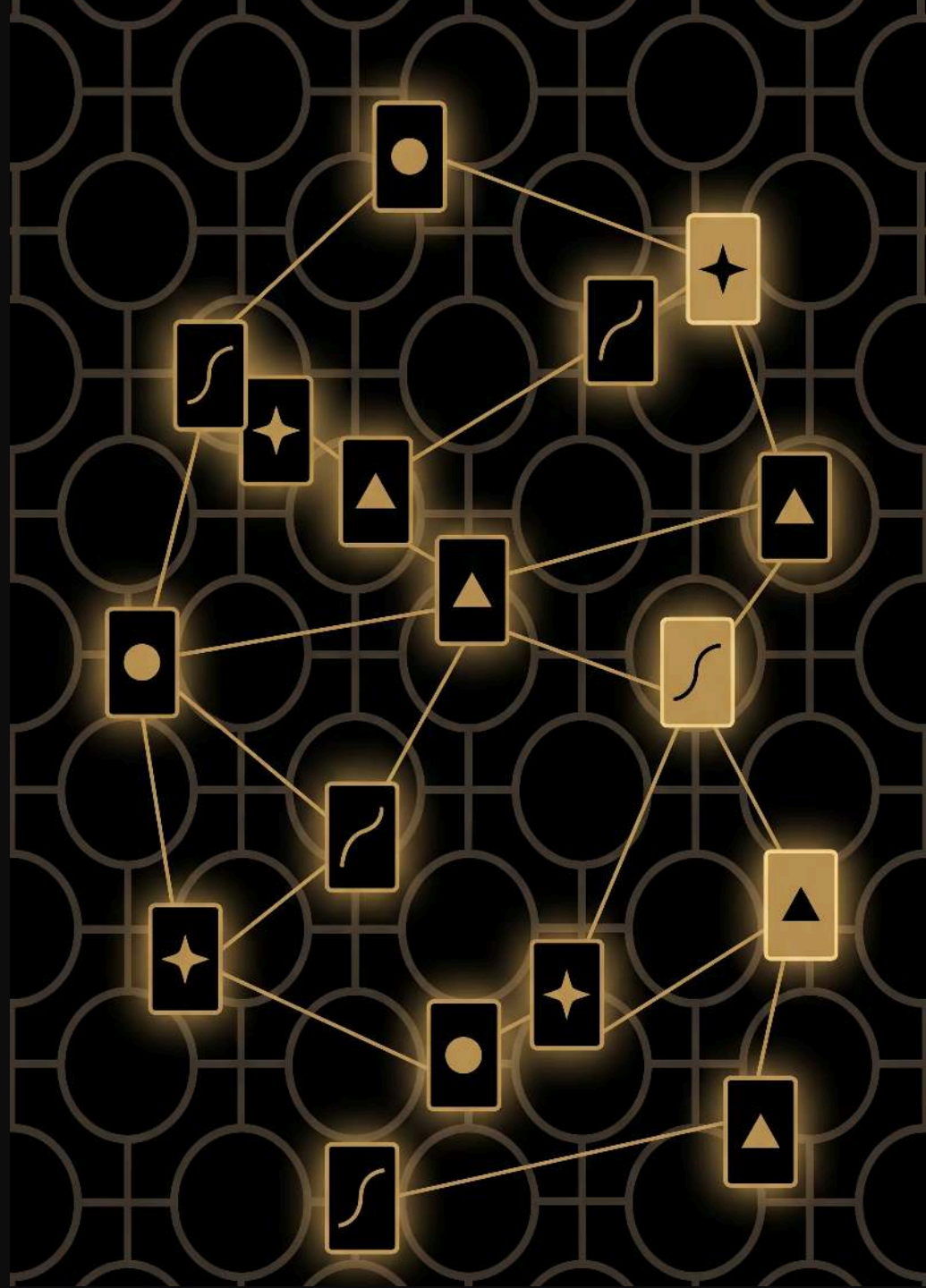
Some words we'll use

artificial intelligence (AI) — technology that mimics some human abilities, like writing stories or answering questions

language model — a system that predicts what word comes next, using patterns it learned from text

training — building a model by finding patterns in text

training data — the text used to train a language model





Training

Start with a text

And I will eat them here and there. Say! I will eat them anywhere!

I do so like green eggs and ham!

— Dr Seuss, *Green Eggs and Ham*



Tidy up the text

```
and i will eat them here and there . say ! i will
eat them anywhere ! i do so like green eggs and
ham !
```

lowercase everything, and note that we've separated `.` and `!` from the word they're next to

A pair of words is a cutout

and i will eat them here and there . say ! i will eat them anywhere ! i do so like green eggs and ham !

green eggs

Every pair becomes a cutout

and i

i will

will eat

eat them

them here

here and

and there

there .

. say

say !

! i

i will

will eat

eat them

them anywhere

anywhere !

! i

i do

do so

so like

like green

green eggs

eggs and

and ham

ham !

Speaker notes

This section used to slide an animated window across the text, one slide per pair. The cutouts already show that overlap themselves (a cutout ends with the word the next cutout starts with), so it’s now three static slides: the tokens, one pair highlighted as a cutout, then every pair as a cutout.

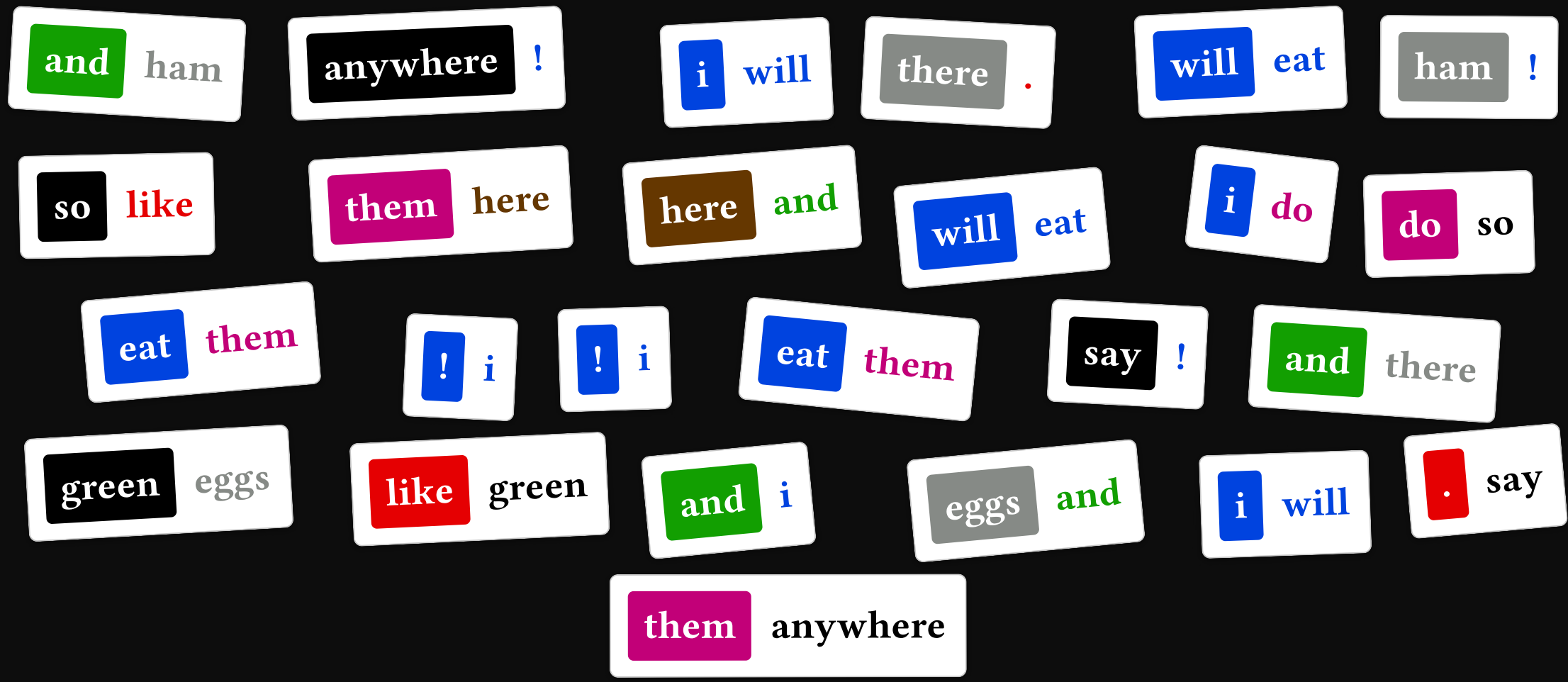
Now they’re just a pile



Now they're just a pile



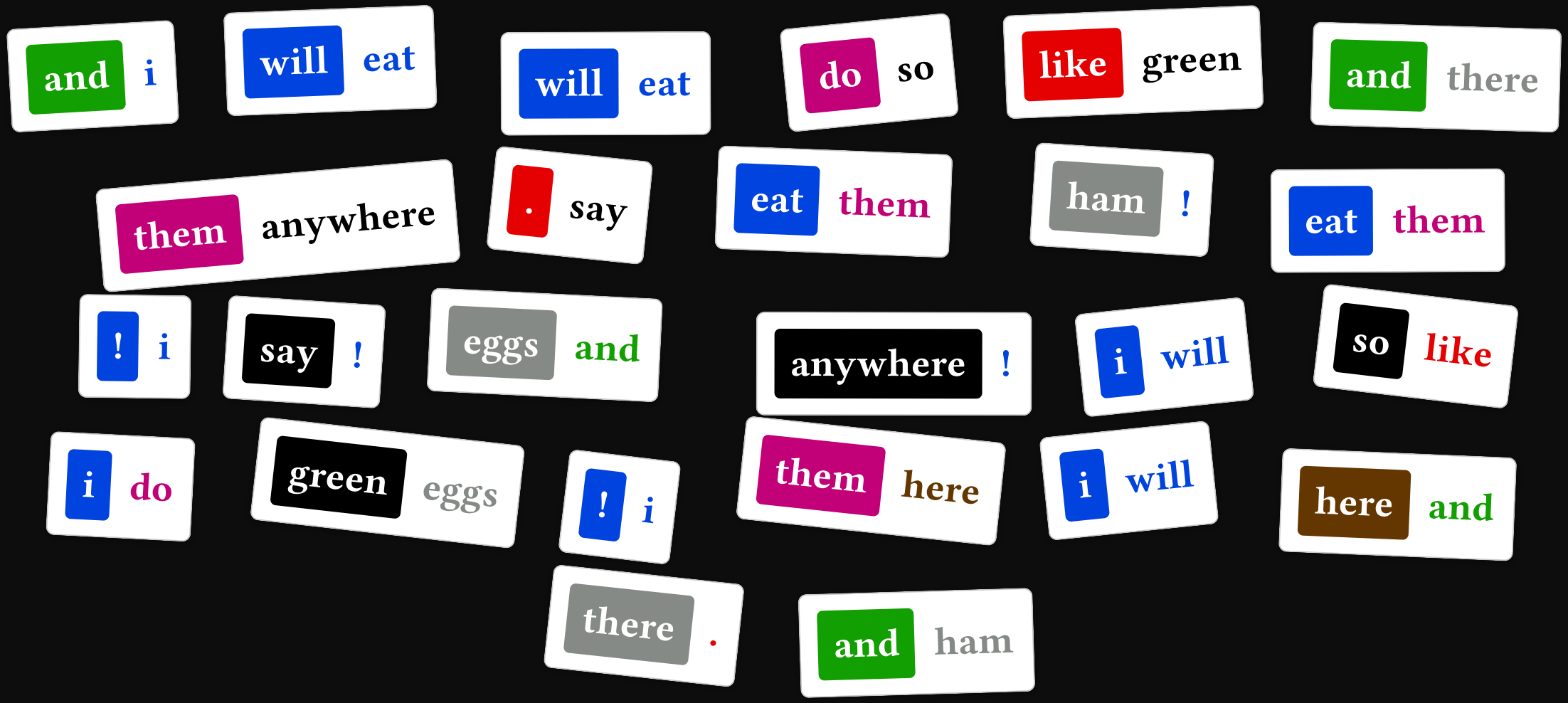
Now they're just a pile



Now they're just a pile



Now they're just a pile



Speaker notes

The “every pair becomes a cutout” (flow) slide before these also carries the pile directive, so the shuffle begins there — each cutout glides from its reading-order slot into the first scattered pile. Then five “scatter” frames of the *same* cutouts with different seeds. All carry `{/* _animate: pile */}`, so Reveal.js auto-animate glides each cutout (matched by its data-id=“cut-N”) from one arrangement to the next — each click reshuffles the pile while the heading stays put (it only crossfades on the way in from the flow slide). Talk across them: this is the hinge into Training/Generation — the model is an unordered bag you rummage through, so order stops mattering once the text is cut up. Add or remove `{/* _animate: pile */}` + `<CutoutsOverview mode="scatter" seed={N}/>` slides (any seed) to lengthen or shorten the shuffle.

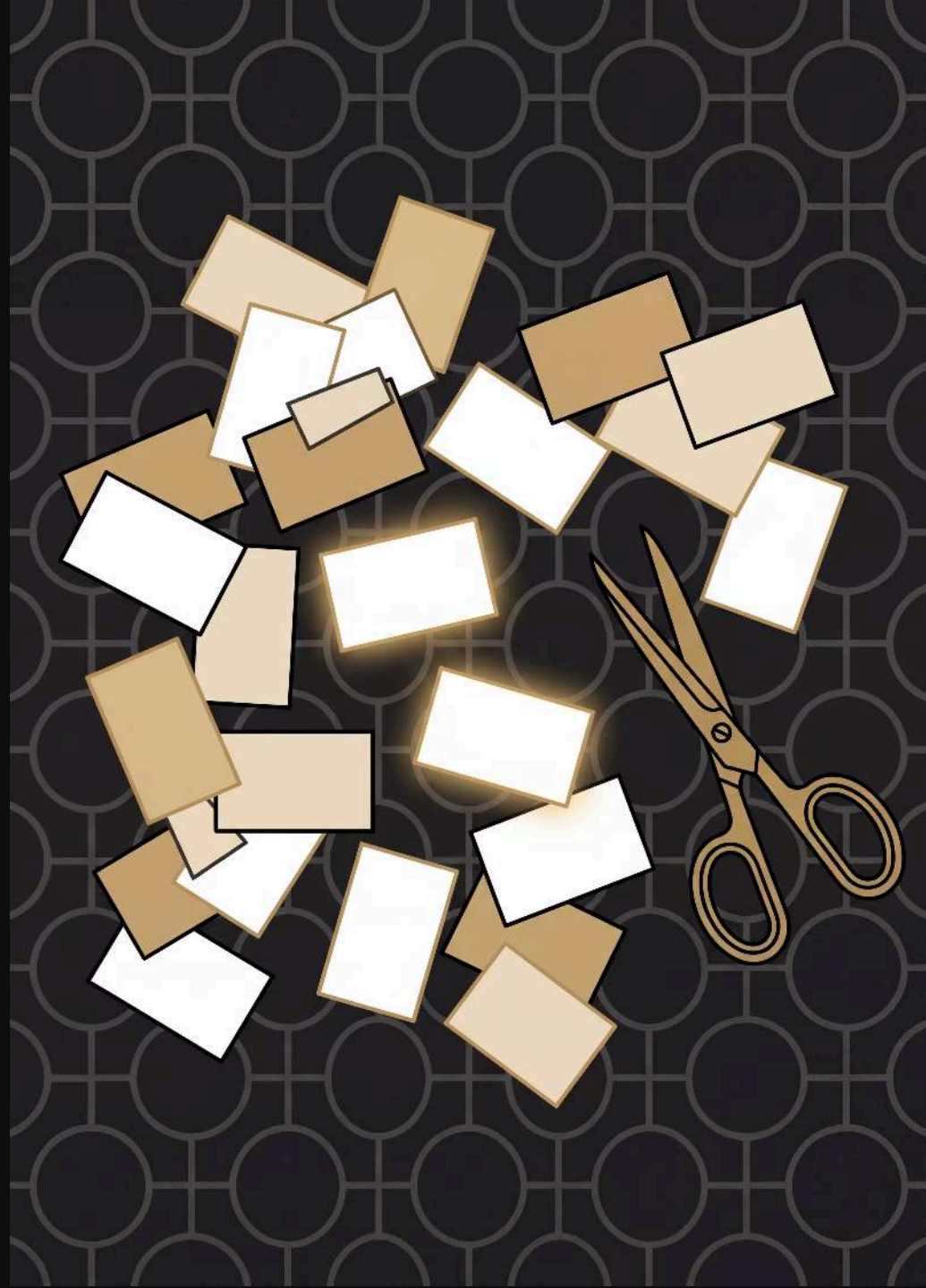
Train your model

with your group you'll need **printed cutouts**, **scissors**, and a **clear table**

cut out the cutouts for your text and spread them on the table — each cutout pairs a **next word** with its **previous word**:

green	eggs

that's it — the spread *is* your trained **language model**



Speaker notes

Once the loose-on-table flow makes sense, groups can optionally sort their cutouts into piles by previous word — it makes hunting for matches faster in the next section.



Training

10:00

start reset +1 −1

Speaker notes

Click the dial to start/pause; use -1 / +1 to adjust on the fly. Circulate and help anyone stuck on cutting or on what “previous / next word” means.



Generation

Your goal

generate new text by chaining cutouts together — write a word, find a cutout whose previous-word box matches, write its next word, then hunt for the next match:

will	eat
eat	them
them	here

the chain grows (like dominoes)



Choose a starting cutout

YOUR PAGE



Choose a starting cutout

YOUR PAGE **will eat**

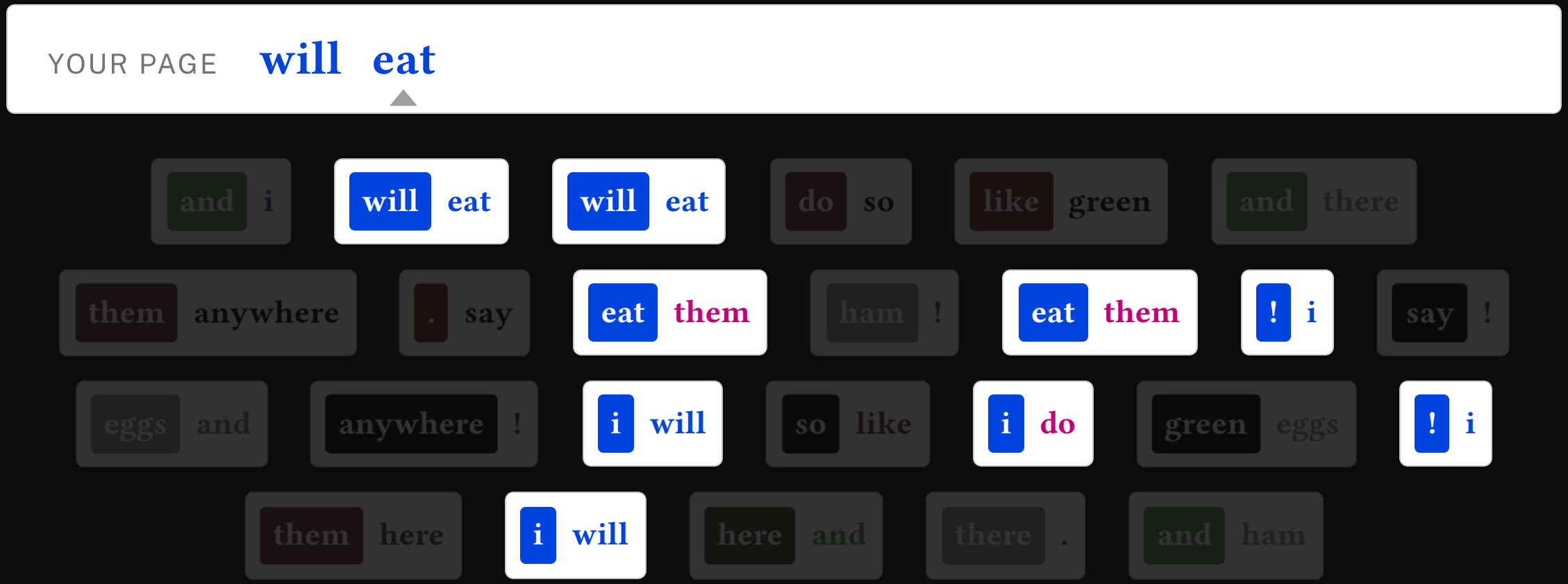


Find the next cutout

YOUR PAGE **will eat**

and i	will eat	will eat	do so	like green	and there
them anywhere	. say	eat them	ham !	eat them	! i	say !
eggs and	anywhere !	i will	so like	i do	green eggs	! i
them here	i will	here and	there .	and ham	

Find the next cutout



Find the next cutout

YOUR PAGE **will** **eat** **them**



Find the next cutout

YOUR PAGE **will eat them**

and i	will eat	will eat	do so	like green	and there
them anywhere	. say	eat them	ham !	eat them	! i	say !
eggs and	anywhere !	i will	so like	i do	green eggs	! i
them here	i will	here and	there .	and ham		

Find the next cutout

YOUR PAGE will eat them



Find the next cutout

YOUR PAGE will eat them



Find the next cutout

YOUR PAGE will eat them here



Find the next cutout

YOUR PAGE will eat them here

and i	will eat	will eat	do so	like green	and there
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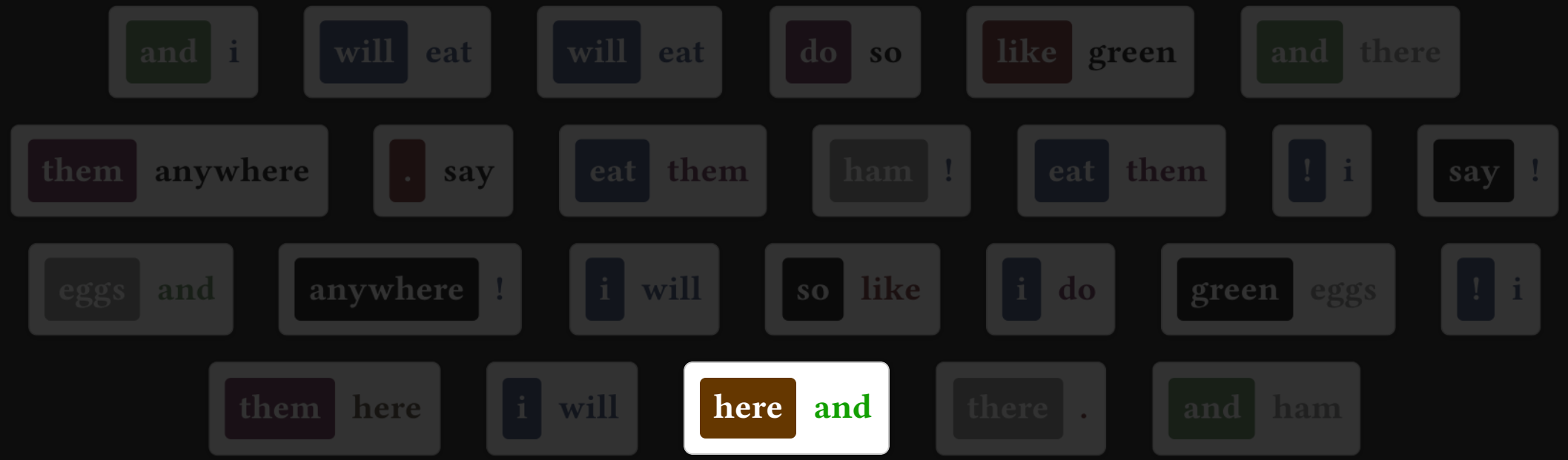
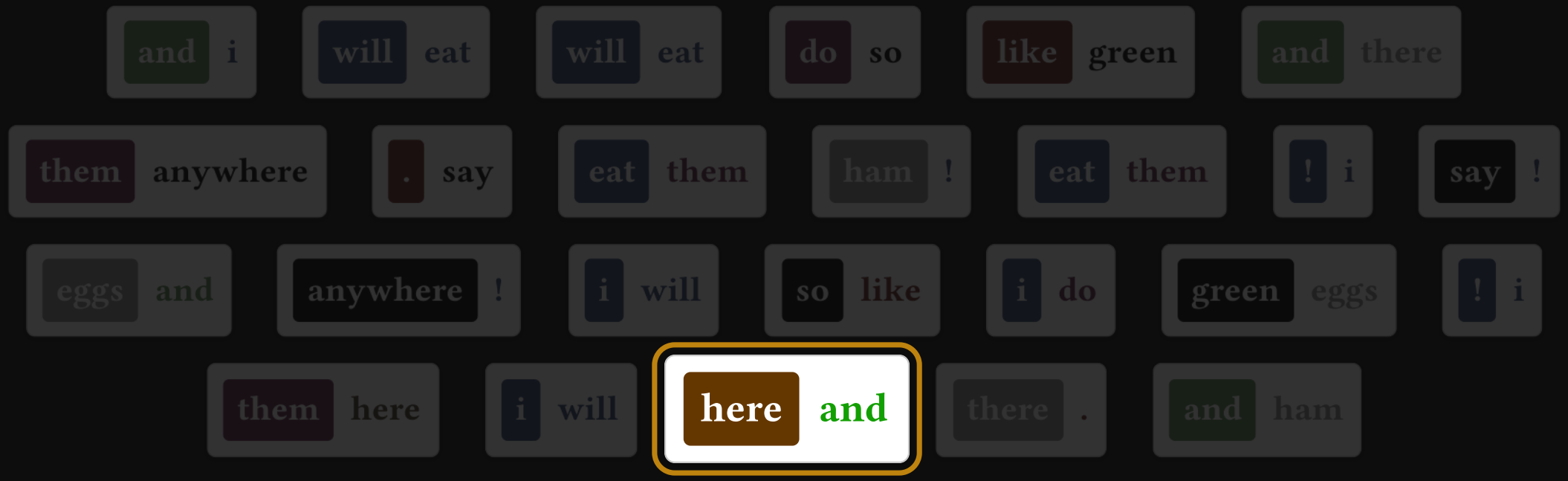
Find the next cutout

YOUR PAGE will eat them here



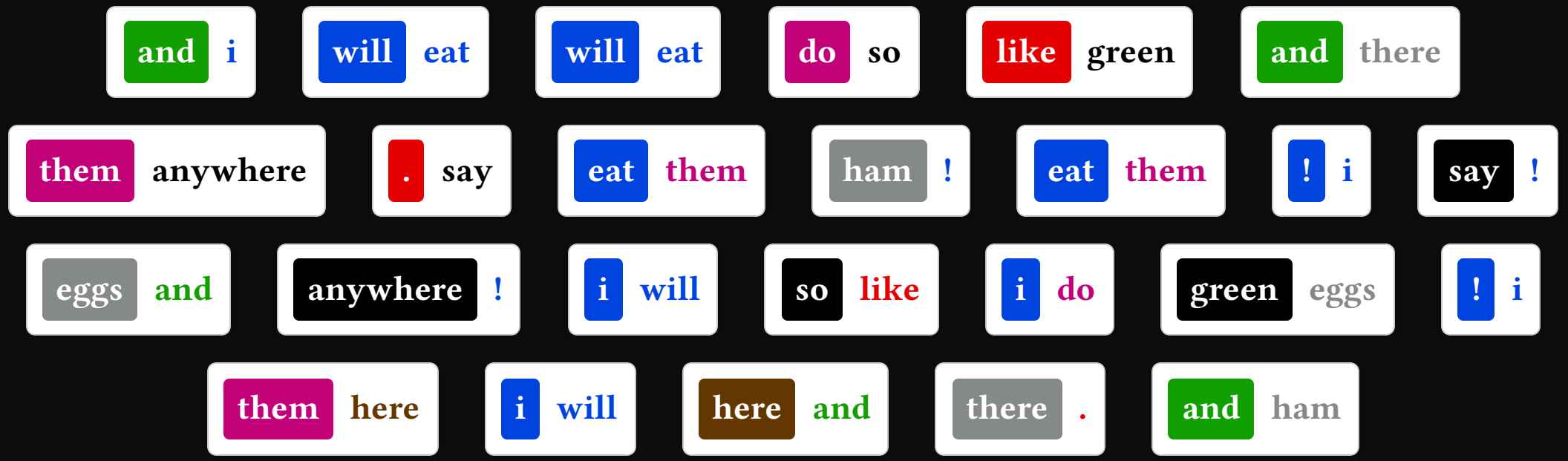
Find the next cutout

YOUR PAGE will eat them here and



Find the next cutout

YOUR PAGE will eat them here and



Find the next cutout

YOUR PAGE **will eat them here and**



Find the next cutout

YOUR PAGE **will eat them here and**



Find the next cutout

YOUR PAGE will eat them here and ham



Speaker notes

The whole generation loop, animated as one auto-animate run (id “hunt”) on the seeded overview pile, with the running output (“your page”) growing above it. It opens on the full pile, then dims everything but the chosen starting cutout (will eat) — you *choose* where to begin and it gives you your first two words — before the hunt proper begins. From there we chase the chain four picks deep: each pick’s next word becomes the word we match next, so the page builds will eat → them → here → and → ham. Each step runs the same narrow-and-select: whole pile lit, then a fast colour scan, then one pick — whose next word lands on the page in gold and seeds the next step. Where the colour scan over-selects (a palette clash), an extra exact-word frame sits between the scan and the pick to refine it; that happens for “them” (“do” rides along) and “and” (“there” rides along), but not for “eat” or “here”, where the colour already isolates the word. That contrast is the point: colour is a quick filter, you confirm by the word only when you must. The finished chain “will eat them here and ham” is a recombination, not a quote: the book runs “…here and there”, but the model rolls “and ham”, mashing “eat them here and” onto “and ham”. Worth saying aloud — it’s the “hint, not a copy” payoff on the impact slide. Adjust the pages/targets/picks or the seed to vary the demo.

“will eat them here and ham”

a hint of the original, not a copy

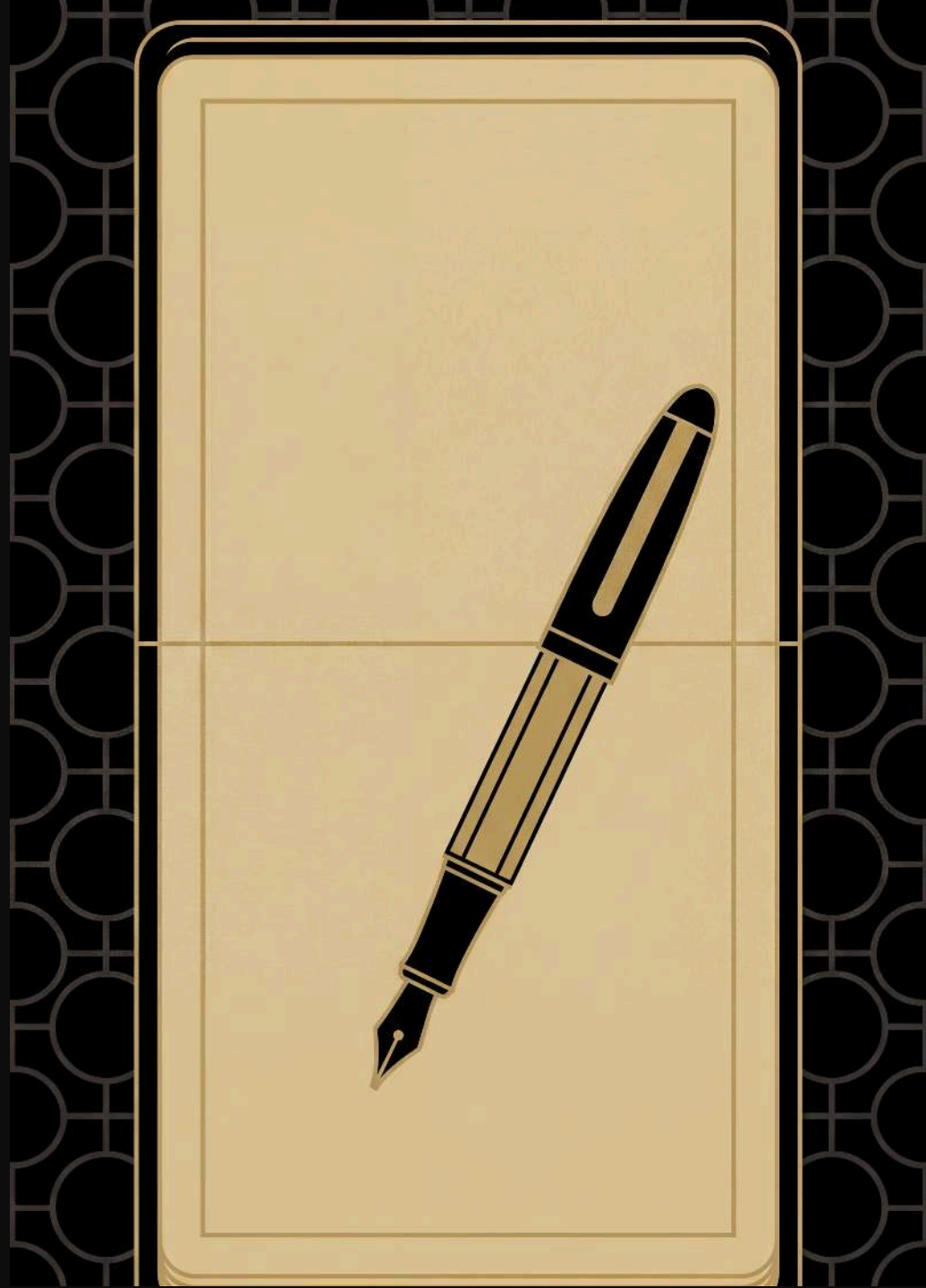


You will need

with your group

your trained cutouts spread (already on the table)

pen and paper to write down the generated text



Activity

generate as much text as you can from your spread — keep chaining words until you run out of time!



Speaker notes

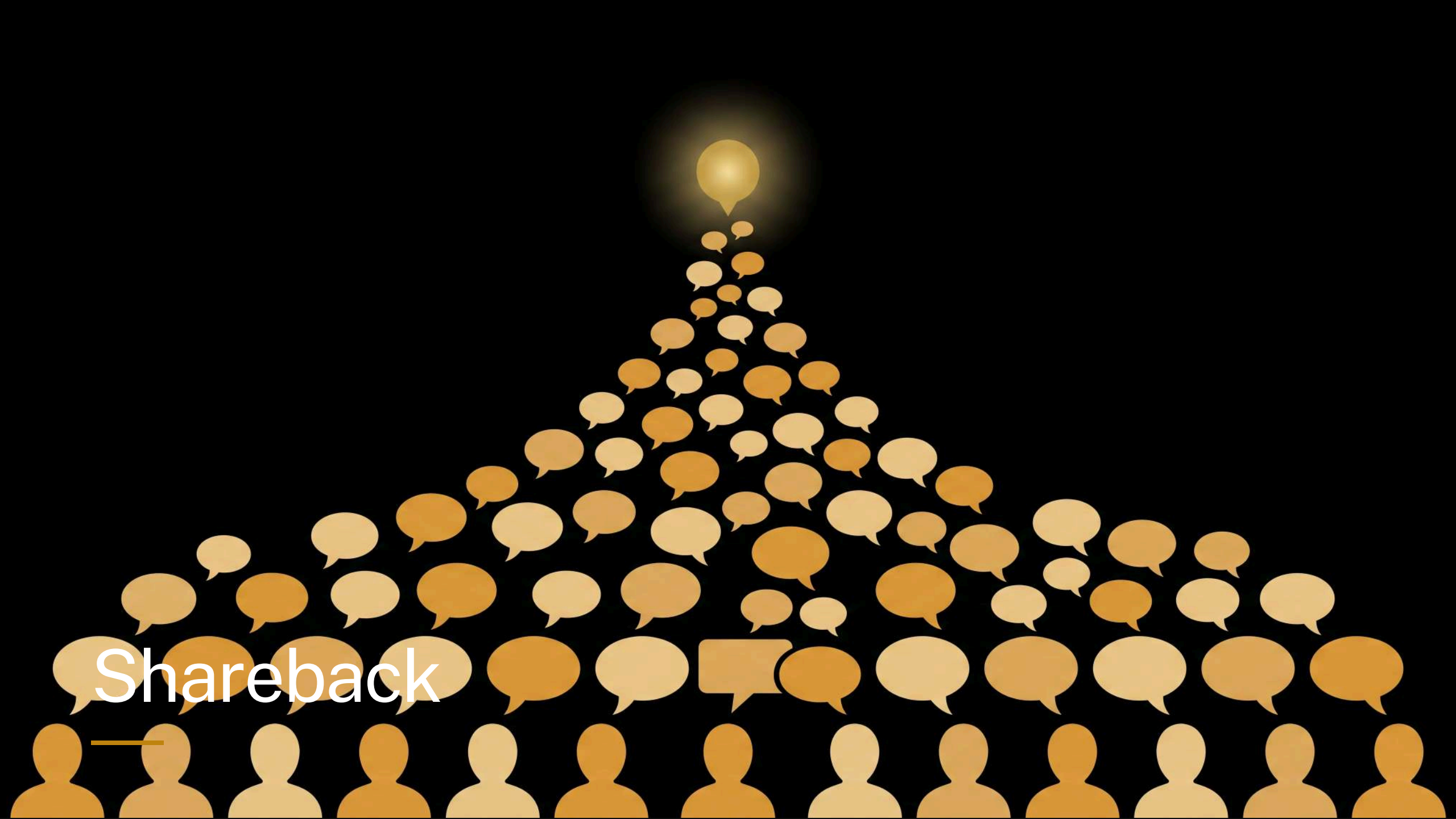
Groups chain words from their spread; the more text the better. 10 min, circulate and unstick anyone who can’t find a match.



Generation

10:00

start reset +1 −1

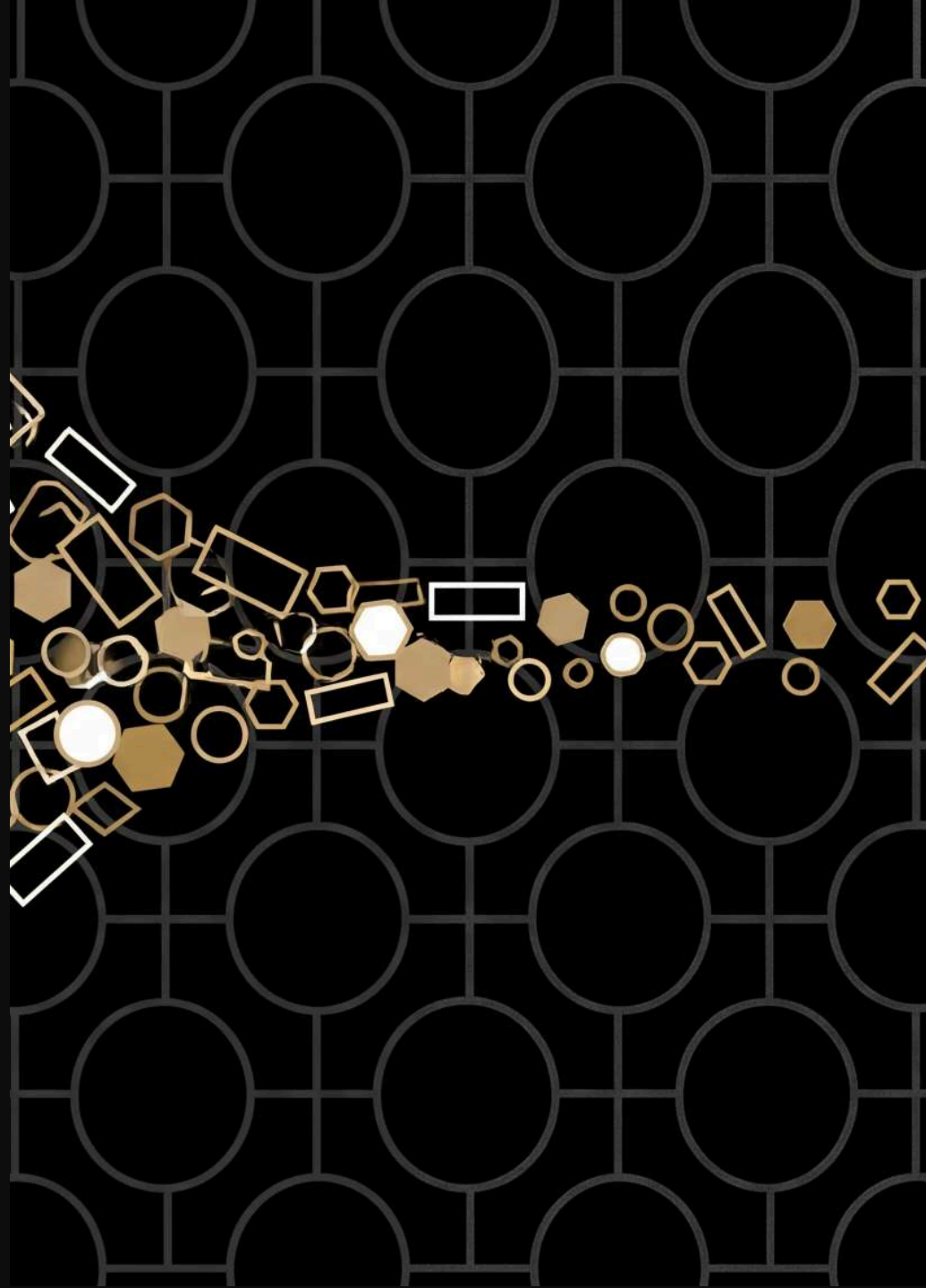


Shareback

How did it go?

did your stories always make sense? why or why not?

can any of your models write a story about a **crocodile**?



Speaker notes

Both questions probe the same limit: a paper model can only use the words (and pairs) it saw in training — there's no "crocodile" anywhere in these books, so it simply can't appear. Sets up the wrap-up reflection.


One story, all together

Speaker notes

Optional section — drop if running short on time.

Everyone is a word hunter

we'll pick **one starting word** for the whole class

everyone hunts for it in their own cutouts

if you find a match, **raise your hand** — we'll pick one and read out the next word, and that becomes the new word to hunt for

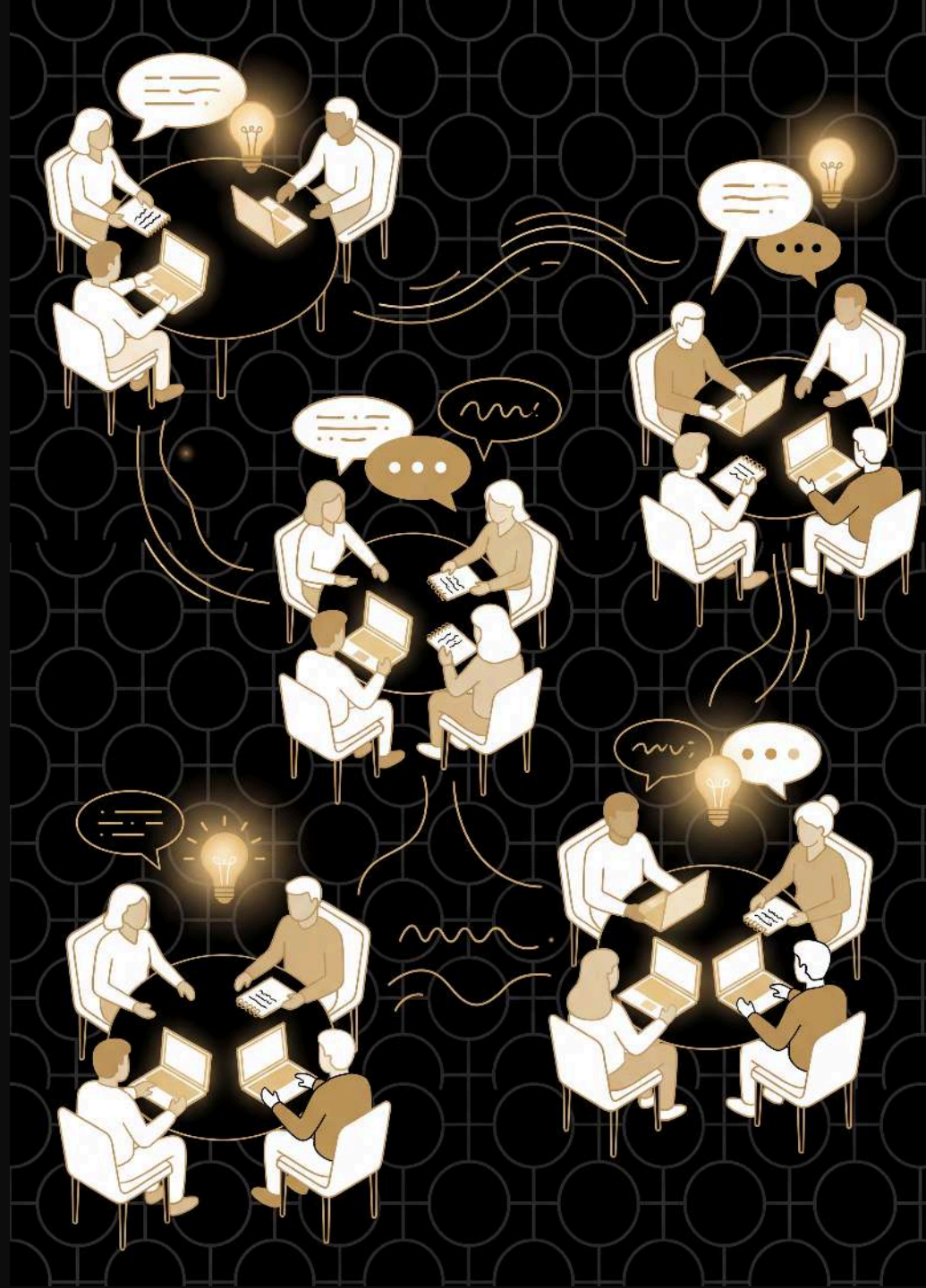


Speaker notes

Pre-write the starting word on the butchers paper. Choose something common across the books (e.g. “we’re”, “the”, “a”). Keep going for a few sentences.


One story, all together

About your stories

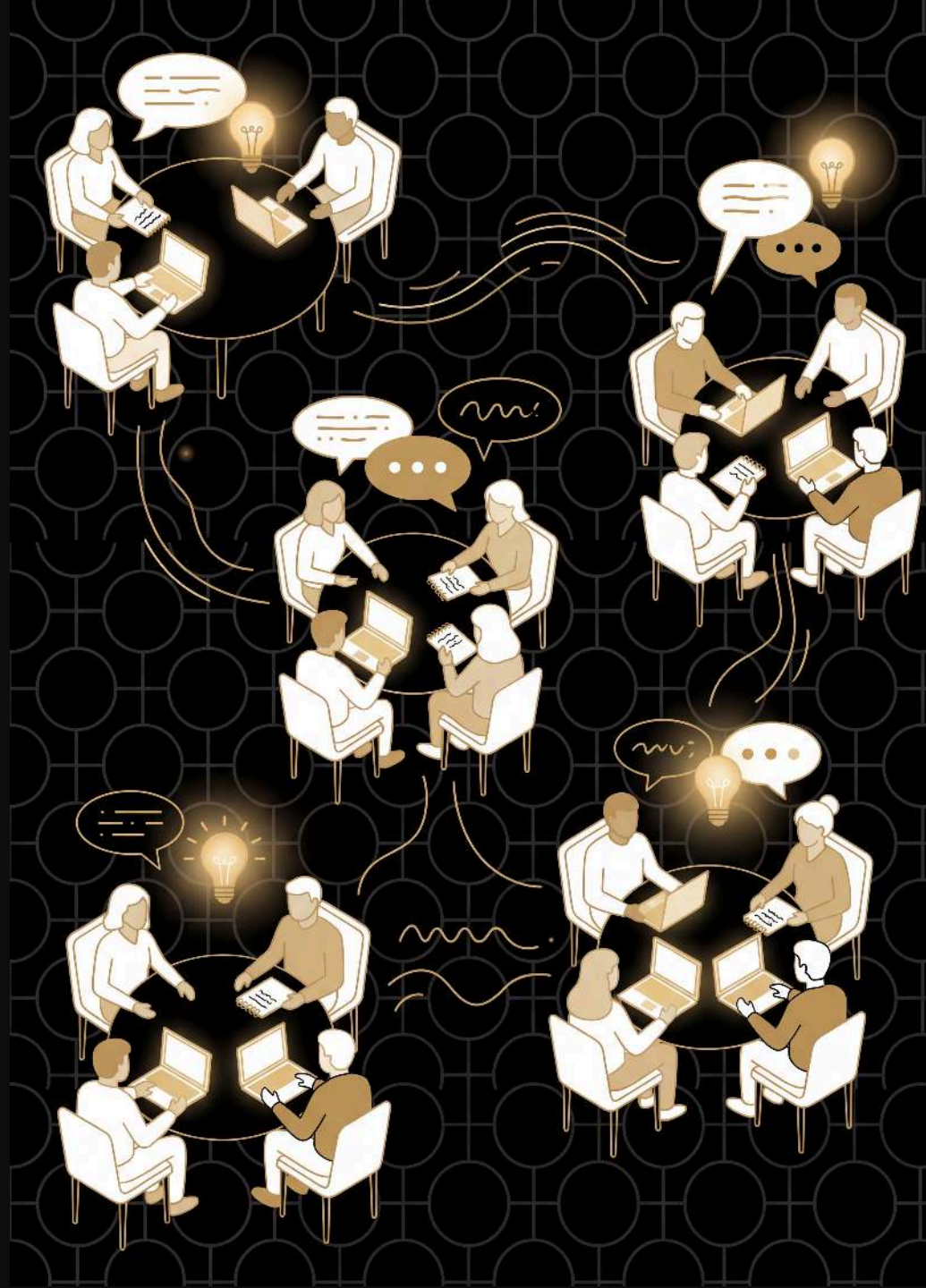


Speaker notes

First question opens the door to “more data, bigger model, longer memory” without naming those terms. Second: no — the model predicts patterns, it isn’t thinking the way we do. Third: re-run a generation (or the Part 1 ChatGPT story) to show the randomness gives a different result each time.

About your stories

what would help our paper language models write **better** stories?



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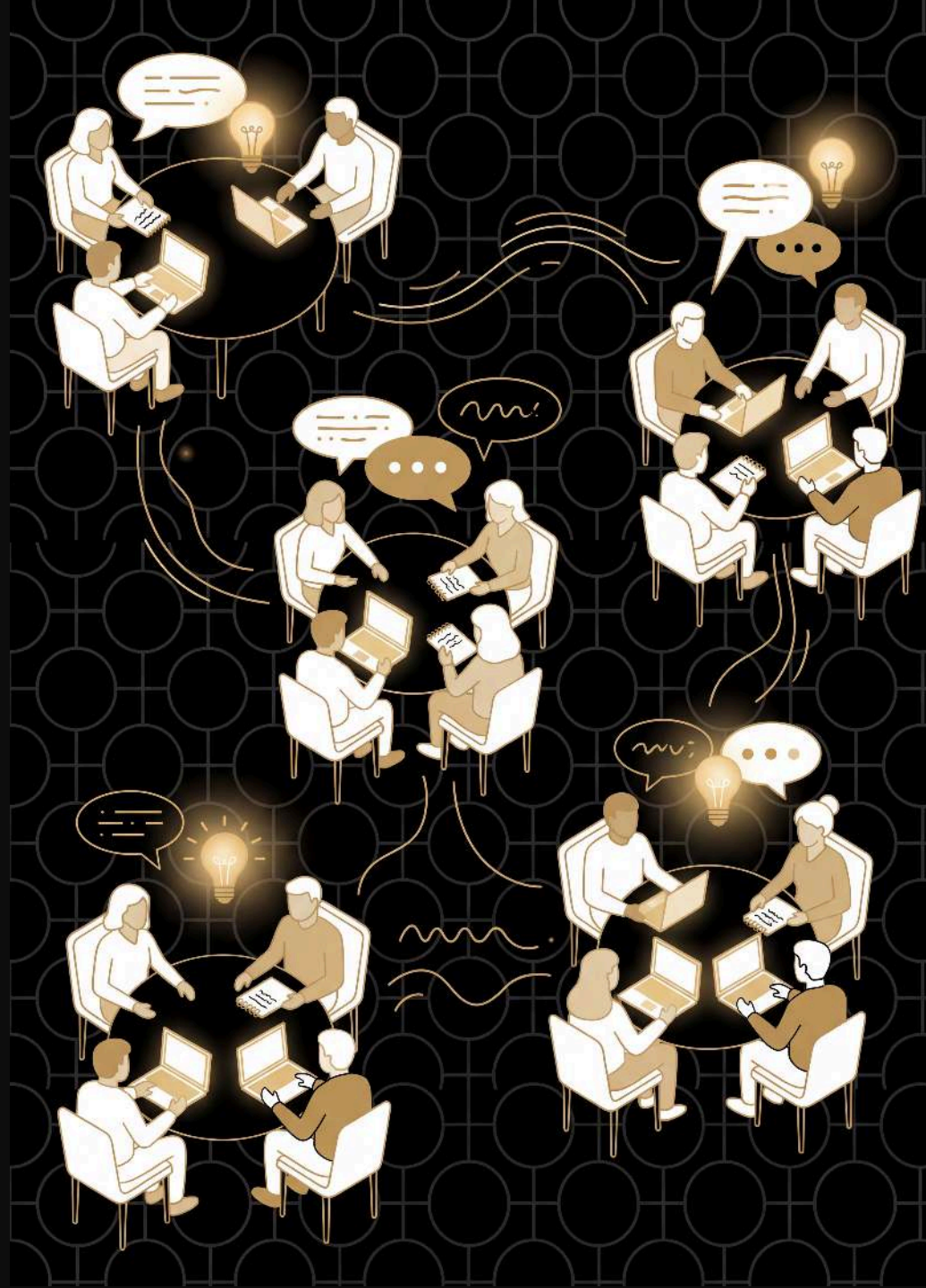
what would help our paper language models write **better** stories?

when you get a language model to write a story for you, is it **thinking** about how to write the best possible story?

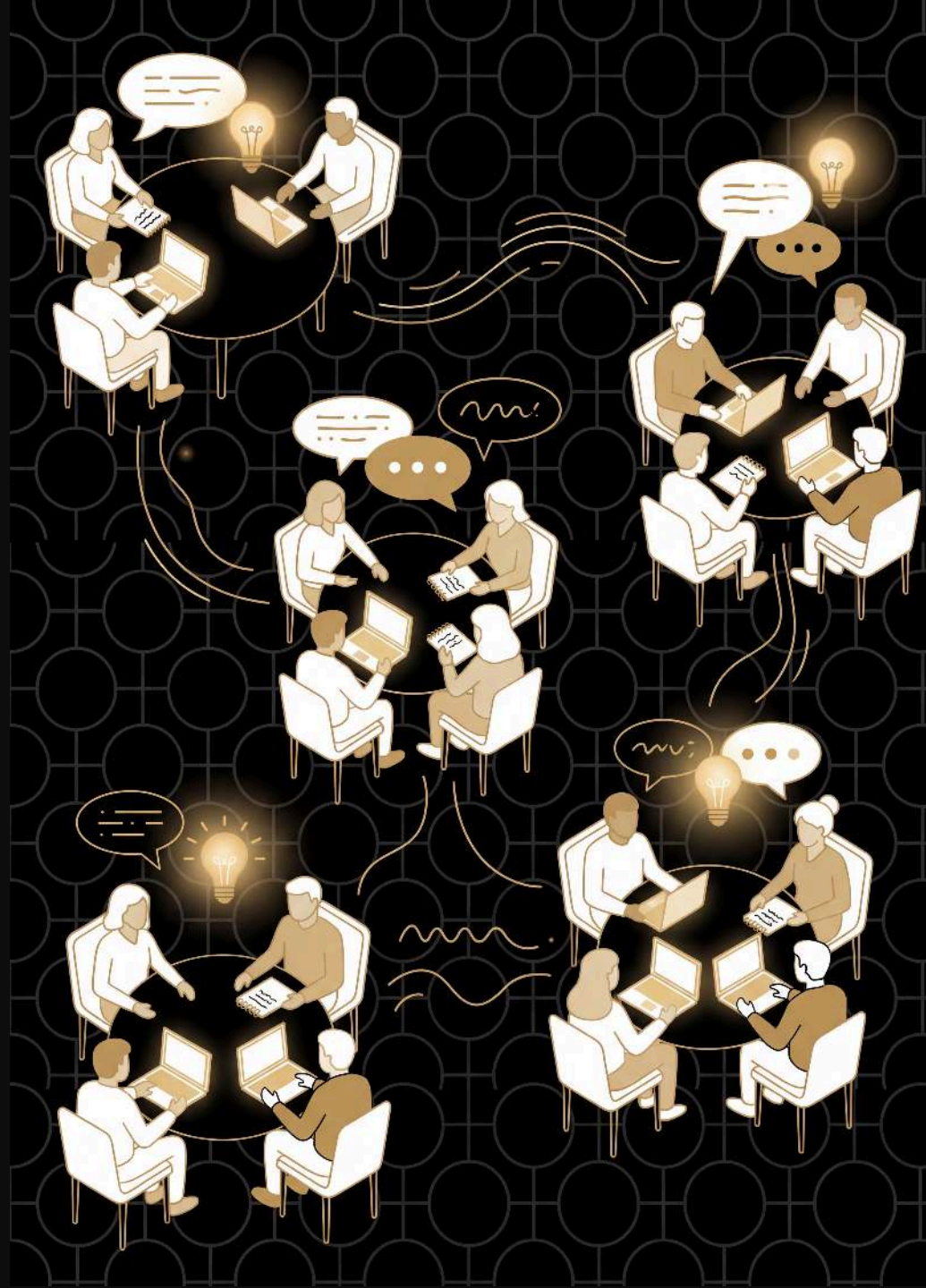


About your stories

what would help our paper language models write **better** stories?

when you get a language model to write a story for you, is it **thinking** about how to write the best possible story?

if you started with the **same starting word**, would you generate the same story again?




Questions?



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