

How does a computer understand the word 'apple'? — Meaning as numbers

Five-Minute AI Lessons · Oct 24, 2026

Turn meaning into bundles of numbers, and 'similar' becomes 'close.'

In a nutshell

- 1 A computer doesn't know letters — it only handles numbers. So it turns each word into **a bundle of several numbers** and works with that.
- 2 They aren't just any numbers. It learns to give similar numbers to words that get used with similar words, so **words with close meanings land in close spots**.
- 3 Once meaning becomes a place, **you can measure near and far with math**. That's the base for tomorrow's lesson, finding similar things.

Seen as letters vs seen as number bundles

As plain letters

- 'dog' and 'puppy' are total strangers
- Different letters, different word
- No way to measure how similar



As number bundles

- Similar meaning, similar numbers
- Near and far can be measured
- Can guess combos it's never seen

People don't set the numbers. While reading a huge amount of text, it adjusts them itself so that words used with similar words get similar numbers.

Key idea: turn meaning into places, and you can calculate near and far

Switch words' pieces of meaning on and off

Apple

5 boxes lit — the starting word

You eat it

Sweet

Round

Grows on trees

Yellow

You kick it

Has a peel

Break 'apple' into pieces of meaning and you get this. A real AI has hundreds of boxes, and the boxes don't eve...

Banana

4 boxes overlap with apple

You eat it

Sweet

Round

Grows on trees

Yellow

You kick it

Has a peel

The only differences are that it isn't round and it is yellow; the rest is almost the same. So banana's number...

Soccer ball

Only one box overlaps

You eat it

Sweet

Round

Grows on trees

Yellow

You kick it

Has a peel

Only 'round' overlaps; everything else is different. So the soccer ball sits far away from apple. That's how a...

Let's pretend each word is a bundle of seven boxes of numbers. Tap a different word to see which boxes light up...

Try it yourself in the web lesson · next-token.net/en/learn/day-48/

Just three questions

Q1

Why turn words into bundles of numbers?

- ① To make the letters look nice
- ② To save storage space
- ③ Computers use numbers, and to measure closeness
- ④ To fix spelling

Q2

Which words end up with similar numbers?

- ① Words with the same number of letters
- ② Short words
- ③ Words it learned first
- ④ Words used with similar words around them

Q3

In the experiment, why is the soccer ball far from apple?

- ① Only one box overlaps
- ② Its name is longer
- ③ It came later
- ④ It has more boxes

Know the why, too

Q1

③

A computer can't understand letters themselves. Turn them into numbers and it can work with them — and even calculate how close two words are.

Q2

④

When the words around them are similar, like 'I ate an apple' and 'I ate a banana,' it learns to make their numbers similar. So words with close meanings gather in close spots.

Q3

①

Banana shared four boxes with apple, but the soccer ball shares only 'round.' The fewer boxes overlap, the farther apart the number bundles — which means the meanings are far...

**Turn meaning into bundles of numbers,
and 'similar' becomes 'close.'**



Tomorrow: Finding similar things — pick for yourself which of two sentences is closer.