DAY 05 · Part 1 · What AI Is

Just how big is this number? — Getting a feel for parameters

Five-Minute AI Lessons · Sep 11, 2026

A bigger number doesn't always mean smarter

In a nutshell

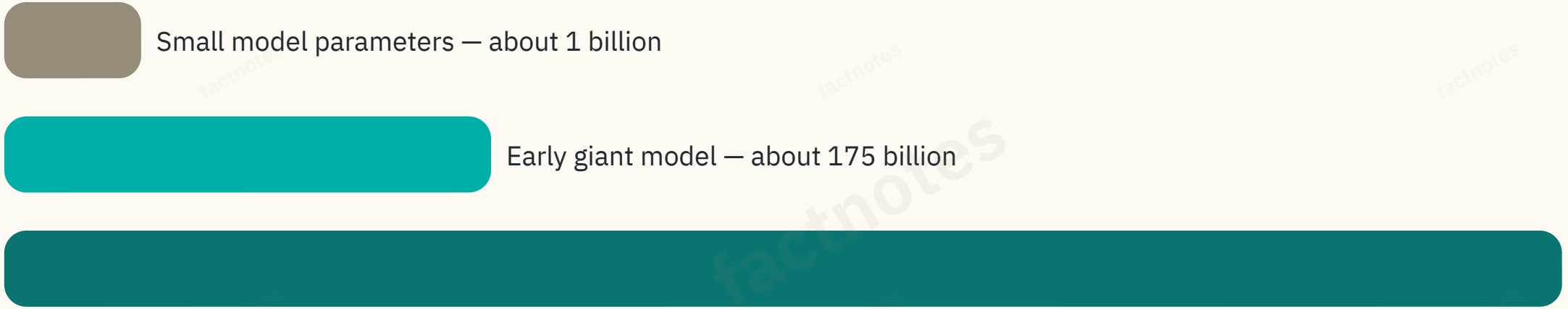
1. Parameters are **how many weight numbers** keep getting adjusted during training. The more there are, the bigger the container for patterns.

2. Today's big models have **tens of billions to 1 trillion** parameters. That's still short of the number of synapses in a human brain (about 100 trillion).

3. More parameters doesn't automatically mean smarter — **what it learned, and how**, has to come along with it.

One picture

A feel for the numbers (not to scale)



※ Bar lengths only help you feel the difference in digits — they are not real proportions

Key idea: AI hasn't caught up with the brain's complexity yet.

The same 'big number' — what can we compare it to?

1 billion

Small model parameters

Parameters

about 1 billion

Compare

About 1 for every 8 people on Earth

Small enough to run even on a phone

175 billion

Early giant model (GPT-3 class)

Parameters

about 175 billion

Compare

Over 20 times the world's population

Too big for people to count by feel

100 trillion

Synapses in a human brain

Synapses

about 100 trillion (estimate)

Compare

More than any known model

AI isn't there yet

Today's goal: feel 'how many digits apart' they are, more than the numbers themselves.

※ The comparisons are rough, to help you understand.

Quick check

Just three questions

Q1

(True / False) The more parameters, the smarter the AI — always.

Q2

What exactly is a parameter?

① The number of sentences the model memorized

② The number of weights adjusted in training

③ The number of servers

④ The number of people using it at once

Q3

(True / False) As far as we know, the estimated number of synapses in a human brain is bigger than the parameter count of any AI model released so far.

Know the why, too

Q1

F

Size is just the container — the amount and quality of the data have to be good too for its skill to grow.

Q2

②

Parameters are the total number of numbers (weights) that get adjusted bit by bit during training.

Q3

T

The parameter counts of publicly known models are still short of the estimate for human brain synapses (about 100 trillion).

A bigger number doesn't always mean smarter.

Tomorrow: 'hallucination' — why does AI calmly make up facts?