DAY 11 · Part 2 · How We Got Here

Where did AI start? — 1958: the neuron that learns

Five-Minute AI Lessons · Sep 17, 2026

Multiply by weights, add, 1 past the threshold — it all started here

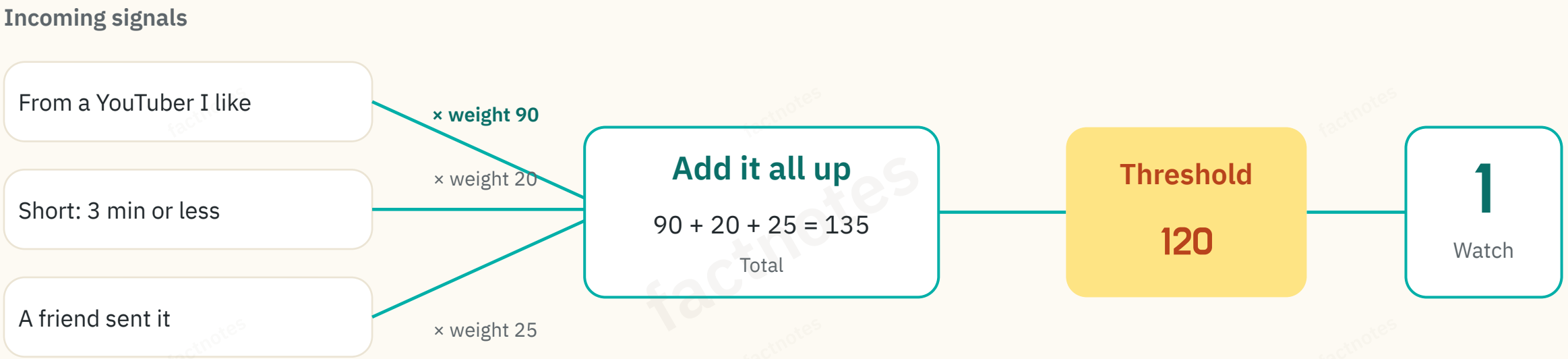
In a nutshell

1. In 1958, Frank Rosenblatt built a machine called the **perceptron** — an artificial neuron copying a single nerve cell in the human brain.

2. It does just one thing. It multiplies each incoming signal by a **weight**, adds them all up, and if the total clears the **threshold** it outputs 1 — if not, 0.

3. Here's what was really new — when it got something wrong, **it nudged its own weights a little**. It was the first machine that learned just from examples, without people writing the rules.

What one artificial neuron does



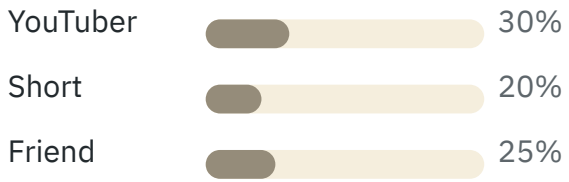
135 clears 120, so it's 1. Lower the weights and the total drops below the threshold — the answer flips to 0.

Key idea: how you set the weights is the decision — and in 1958, the machine fixed them itself

Move the weights and the answer flips

75 / 120

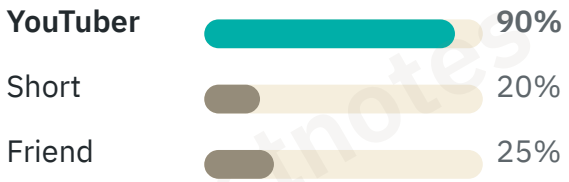
When all the weights are small



The total falls short of the threshold → 0, skip it. Even with all three signals on.

135 / 120

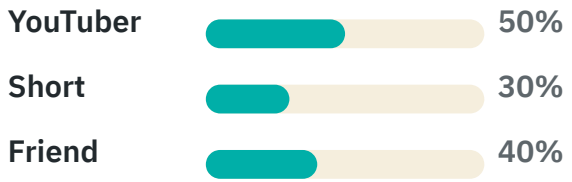
Raise only the ‘YouTuber I like’ weight



That one alone clears the threshold → 1, watch it. One weight drives the decision.

120 / 120

Spread the weights evenly



None clears it alone, but together they just make it → 1. Only the total counts.

Same signals, same machine. Only the weights changed, yet the answer flips between 0 and 1.

Sources: Frank Rosenblatt, The Perceptron (Psychological Review 65(6), 1958) · McCulloch–Pitts formal neuron (1943)

Quick check

Just three questions

Q1

What does one perceptron (artificial neuron) do, in one line?

① Memorizes whole sentences and repeats them
② Multiplies by weights, adds up, 1 past threshold
③ Searches the internet for the answer
④ Follows rules people wrote, one by one

Q2

What made the 1958 perceptron most different from earlier machines?

① It computed much faster
② It didn't use electricity
③ It fixed its own weights when wrong
④ It could make pictures and music

Q3

What else do we call the perceptron's ‘weights’ in today's AI?

① Tokens
② Parameters — from DAY 05
③ Prompts
④ Temperature

Know the why, too

Q1

② Multiply, add, compare with the threshold. That's all three — today's AI just does this math an enormous number of times.

Q2

③ Instead of people writing every rule, it nudged its weights by however much it was wrong. That was the start of machines that learn from examples.

Q3

② Parameters. When DAY 05 counted how many parameters a model has, these weights are exactly what was being counted.

Today's AI is really just that one 1958 neuron, stacked up many, many times.

But there were problems this one neuron couldn't solve. Tomorrow: how hitting that wall froze research twice — the AI winters.