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A new study conducted at Engineering UPF finds that ChatGPT reproduces a behavior similar to that of humans when identifying words

The artificial intelligence model, like humans, gives more importance to consonants than to vowels. This behavior is not programmed into the system but emerges from its learning process

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In humans, it has long been known that consonants play a key role in recognizing written words. Even if we change a vowel, we can often still easily identify a word. However, if we change a consonant, it becomes much more difficult.

To test whether this also happens with artificial intelligence, researcher Juan Manuel Toro, an ICREA researcher at UPF Engineering, presented ChatGPT with a simple challenge. He showed the model a real word and two very similar invented words: one preserved all the consonants but changed a vowel, while the other preserved the vowels but changed a consonant. The model had to choose which one was more similar to the original word.

The result was clear: in more than 70% of the cases, ChatGPT considered the word that preserved the consonants to be more similar, both in English and in Spanish.

What is most interesting is that this “bias” is not programmed into the system. Artificial intelligence models learn by analyzing enormous amounts of text and detecting patterns. Since languages contain more consonants than vowels and consonants provide more information for distinguishing words, the system naturally ends up giving them greater weight.

According to the authors, this discovery is relevant because it suggests that some mechanisms of human language may emerge simply from exposure to language patterns, without the need for predefined rules. Moreover, it opens new avenues for using artificial intelligence as a tool to study how we learn languages.