Text as a source of perceptual signal

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Abstract

Proponents of the Symbol Grounding Problem have claimed that unimodal text-based AI systems can never develop meaningful representations of the world since they lack the capacity to perceive it. Perception is a relation between an agent and their environment which is grounded in perceptual processing. The earliest stages of perceptual processing involve receptivity to sources of perceptual signal in the environment: light waves, pressure waves, and volatile airborne chemicals are all sources of perceptual signal, insofar as agents appropriately receptive to their properties can (with further processing) perceive the world through them. I argue that (1) human-generated text carries sufficient information about the world to be a possible source of perceptual signal for appropriately receptive agents, and that (2) recent generations of Large Language Models (LLMs) are such agents. Although (1) and (2) do not entail that LLMs are perceivers, they do entail that symbol grounding is achievable without multimodality.

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