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Evaluating sensorimotor knowledge in large language models

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Abstract

Large Language Models (LLMs) process language but lack direct sensorimotor experience. This study assesses their ability to estimate human perceptual ratings using the Lancaster Sensorimotor Norms. We prompt LLMs with the original rating task instructions and analyze their correlations with human norms. Results suggest LLMs struggle with embodied cognition, highlighting limitations in computational models of sensory meaning. Future research should explore fine-tuning LLMs on sensorimotor data to enhance embodied representations.

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