

UC Merced

Proceedings of the Annual Meeting of the Cognitive Science Society

Title

Processing of scene intrinsics in the ventral visual stream for object recognition

Permalink

<https://escholarship.org/uc/item/9nj174x3>

Journal

Proceedings of the Annual Meeting of the Cognitive Science Society, 46(0)

Authors

Kapoor, Shreya

Egger, Bernhard

Publication Date

2024

Peer reviewed

Simulating Opinion Dynamics with Networks of LLM-based Agents

Yun-Shiuan Chuang

University of Wisconsin - Madison, Madison, Wisconsin, United States

Agam Goyal

University of Wisconsin - Madison, Madison, Wisconsin, United States

Nikunj Harlalka

University of Wisconsin - Madison, Madison, Wisconsin, United States

Siddharth Suresh

University of Wisconsin-Madison, Madison, Wisconsin, United States

Robert Hawkins

University of Wisconsin-Madison, Madison, Wisconsin, United States

Sijia Yang

University of Wisconsin - Madison, Madison, Wisconsin, United States

Dhavan Shah

University of Wisconsin - Madison, Madison, Wisconsin, United States

Junjie Hu

University of Wisconsin-Madison, Madison, Wisconsin, United States

Timothy Rogers

University of Wisconsin- Madison, Madison, Wisconsin, United States

Abstract

Accurately simulating human opinion dynamics is crucial for understanding a variety of societal phenomena, including polarization and the spread of misinformation. However, the agent-based models (ABMs) commonly used for such simulations often over-simplify human behavior. We propose a new approach to simulating opinion dynamics based on populations of Large Language Models (LLMs). Our findings reveal a strong inherent bias in LLM agents towards producing accurate information, leading simulated agents to consensus in line with scientific reality. This bias limits their utility for understanding resistance to consensus views on issues like climate change. After inducing confirmation bias through prompt engineering, however, we observed opinion fragmentation in line with existing agent-based modeling and opinion dynamics research. These insights highlight the promise and limitations of LLM agents in this domain and suggest a path forward: refining LLMs with real-world discourse to better simulate the evolution of human beliefs.