Paper 1

Title: The AI Scientist: Towards Fully Automated Open-Ended Scientific Discovery

Authors: Chris Lu, Cong Lu, Robert Tjarko Lange, Jakob Foerster, Jeff Clune, David Ha

Abstract: One of the grand challenges of artificial general intelligence is developing agents capable of conducting scientific research and discovering new knowledge. While frontier models have already been used as aides to human scientists, they still conduct only a small part of the scientific process. This paper presents the first comprehensive framework for fully automatic scientific discovery, enabling frontier large language models to perform research independently and communicate their findings. We introduce The AI Scientist, which generates novel research ideas, writes code, executes experiments, visualizes results, describes its findings by writing a full scientific paper, and then runs a simulated review process for evaluation.

Paper 2

Title: The AI Scientist■v2: Workshop■Level Automated Scientific Discovery via Agentic Tree Search

Authors: Yutaro Yamada, Robert Tjarko Lange, Cong Lu, Shengran Hu, Chris Lu, Jakob Foerster, Jeff Clune, David Ha

Abstract: AI is increasingly playing a pivotal role in transforming how scientific discoveries are made. We introduce The AI Scientist■v2, an end■to■end agentic system capable of producing the first entirely AI generated peer■review■accepted workshop paper. This system iteratively formulates scientific hypotheses, designs and executes experiments, analyzes and visualizes data, and autonomously authors scientific manuscripts.

Paper 3

Title: CS■PaperSum: A Large■Scale Dataset of AI■Generated Summaries for Scientific Papers

Authors: Javin Liu, Aryan Vats, Zihao He

Abstract: The rapid expansion of scientific literature in computer science presents challenges in tracking research trends and extracting key insights. Existing datasets provide metadata but lack structured summaries that capture core contributions and methodologies. We introduce CS■PaperSum, a large■scale dataset of 91,919 papers from 31 top■tier computer science conferences, enriched with AI■generated structured summaries using ChatGPT.

Paper 4

Title: Learning Representations of Learning Representations

Authors: Rita González■Márquez, Dmitry Kobak

Abstract: The ICLR conference is unique among the top machine learning conferences in that all submitted papers are openly available. Here we present the ICLR dataset consisting of abstracts of all ~24 thousand ICLR submissions from 2017■2024 with meta■data, decision scores, and custom keyword■based labels. We find that on this dataset, bag■of■words representation outperforms most dedicated sentence transformer models.

Paper 5

Title: Publication Trends in Artificial Intelligence Conferences: The Rise of Super Prolific Authors

Authors: Ariful Azad, Afeefa Banu

Abstract: Papers published in top conferences contribute influential discoveries that are reshaping the landscape of modern Artificial Intelligence (AI). We analyzed 87,137 papers from 11 AI conferences to examine publication trends over the past decade. Our findings reveal a consistent increase in both the number of papers and authors, reflecting the growing interest in AI research.