

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.