The Future of Artificial Intelligence

John Laird
Professor, Electrical Engineering and Computer Science

CURRENT RESEARCH

Using the computational structure of our mind to build general intelligent systems

Imagine an automated assistant that actually understands your goals and job, and can be customized to the way you want things to be done. If we understand the computational processes underlying training Artificial Intelligence (AI) systems, we may well learn how to educate and train humans, and develop AI systems that can then educate us. Creating AI systems that understand our needs and learn new tasks may further help us develop systems that allow the elderly to maintain more autonomy and better and even cheaper home care. If we have intelligent home robots, we can eliminate the drudgery of home maintenance - much more than just automated vacuums. Therefore, Dr. John Laird and his team at the University of Michigan are trying to understand how the mind works from a computational perspective, having embarked on a long-term commitment to creating a highly functional, integrated cognitive architecture named *Soar* that has many, if not most of the capabilities of humans, including perception, decision making, reasoning, problem solving, language, and many forms of learning. The more we can get AI systems to help us make intelligent decisions, the better prepared we will be for dealing with our everyday problems as well as those of our broader society.

Inspired mainly by psychology and marginally by neuroscience, Dr. Laird is driven by the desire to understand the computational structure of the mind - or its cognitive architecture - and using that understanding to build general intelligent systems. The hypothesis is that there is a level of description of the mind that can be understood in terms of structures such as decision making, short-term memory, and different types of long-term memory. Dr. Laird...

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AFFILIATION

University of Michigan

EDUCATION

- Ph.D. in Computer Science 1983,Carnegie Mellon University
- M.S. in Computer Science 1978, Carnegie Mellon University
- B.S. with High Distinction in Communication and Computer Sciences 1975,University of Michigan

AWARDS

- Fellow of the American Association for the Advancement of Science (AAAS), 2012
- John L. Tishman Professor of Engineering, University of Michigan, 2008 – present
- Fellow of Cognitive Science Society, 2008
- Fellow of the ACM, 2007
- Fellow of the Association for the Advancement of Artificial Intelligence (AAAI), 1995

RESEARCH AREAS

Technology, Computational Sciences / Mathematics, Robotics, IOT, Devices, Data

FUNDING REQUEST

Your contributions will help support personnel as Dr. John Laird of the University of Michigan and his team of graduate students and a research programmer continue their exploratory research to discover how cognitive architectures can take advantage of the recent progress in deep learning and in large-scale knowledge bases. By donating, you will play a key role in creating an agent that truly surprises humans in its cognitive capabilities and ability to interact with us in an ongoing dialog. Donations to this fundraiser are not considered gifts to the University of Michigan.