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The Role of Cognitive Architectures in General Artificial Intelligence

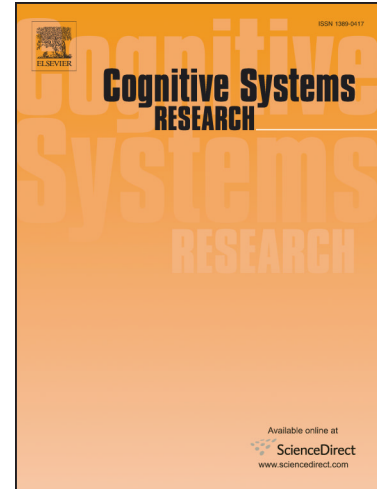
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# The Role of Cognitive Architectures in General Artificial Intelligence

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## Abstract

The term “Cognitive Architectures” indicates both abstract models of cognition, in natural and artificial agents, and the software instantiations of such models which are then employed in the field of Artificial Intelligence (AI). The main role of Cognitive Architectures in AI is that one of enabling the realization of artificial systems able to exhibit intelligent behavior in a general setting through a detailed analogy with the constitutive and developmental functioning and mechanisms underlying human cognition. We provide a brief overview of the status quo and the potential role that Cognitive Architectures may served in the fields of Computational Cognitive Science and Artificial Intelligence (AI) research.

*Keywords:* Cognitive Architectures, Artificial Intelligence, Autonomous Systems, General Artificial Intelligence

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## 1. Cognitive Architectures: Design Perspectives and Open Challenges

The design and development of Cognitive Architectures (CAs) is a wide and active area of research in Cognitive Science, Artificial Intelligence and, more recently, in the areas of Computational Neuroscience, Cognitive Robotics, and

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