ARTIFICIAL INTELLIGENCE

An International Journal

AUTHOR INFORMATION PACK

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DESCRIPTION

Artificial Intelligence, which commenced publication in 1970, is now the generally accepted premier international forum for the publication of results of current research in this field. The journal welcomes foundational and applied papers describing mature work involving computational accounts of aspects of **intelligence**. Specifically, it welcomes papers on:

Artificial Intelligence and Philosophy Automated reasoning and inference Case-based reasoning Cognitive aspects of AI Commonsense reasoning Constraint processing Heuristic search High-level computer vision Intelligent interfaces Intelligent robotics Knowledge representation Machine learning Multiagent systems Natural language processing Planning and theories of action Reasoning under uncertainty or imprecision

The journal reports results achieved; proposals for new ways of looking at **AI** problems must include demonstrations of effectiveness. Papers describing systems or architectures integrating multiple technologies are welcomed. *Artificial Intelligence (AIJ)* also invites papers on applications, which should describe a principled solution, emphasize its novelty, and present an in-depth evaluation of the AI techniques being exploited. The journal publishes an annual issue devoted to survey articles and also hosts a "competition section" devoted to reporting results from AI competitions. From time to time, there are special issues devoted to a particular topic; such special issues always have open calls.

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INTRODUCTION

The journal *Artificial Intelligence (AIJ)* welcomes basic and applied papers describing mature work involving computational accounts of aspects of intelligence that is both complete and novel. The question of whether a paper is complete is ultimately determined by reviewers and editors on a case-by-case basis. Generally, a paper should include all relevant proofs and/or experimental data, a thorough discussion of connections with the existing literature, and a convincing discussion of the motivations and implications of the presented work. A paper is novel if the results it describes were not previously published by other authors, and were not previously published by the same authors in any archival journal. In particular, a previous conference publication by the same authors does not disqualify a submission on the grounds of novelty. However, it is rarely the case that conference papers satisfy the completeness criterion without the addition of new material. Indeed, even prize winning papers from major conferences often undergo major revision following referee comments before being accepted to AIJ.

AIJ welcomes papers on: *AI and Philosophy, automated reasoning and inference, case-based reasoning, cognitive aspects of AI, commonsense reasoning, constraint processing, heuristic search, high-level computer vision, intelligent interfaces, intelligent robotics, knowledge representation, machine learning, multiagent systems, natural language processing, planning and theories of action, reasoning under uncertainty or imprecision.*

The journal reports results achieved; proposals for new ways of looking at AI problems must include demonstrations of effectiveness. Papers describing systems or architectures integrating multiple technologies are welcomed. AIJ also invites papers on applications, which should describe a principled solution, emphasize its novelty, and present an in-depth evaluation of the AI techniques being exploited. The journal publishes an annual issue devoted to survey articles and also hosts a "competition section" devoted to reporting results from AI competitions. From time to time, there are special issues devoted to a particular topic; such special issues will always feature open calls-for-papers. Guidance on the submission of proposals for special issues, as well as other material for authors and reviewers can be found at http://www.aijd.org.

Artificial Intelligence caters to a broad readership. Papers that are heavily mathematical in content are welcome but should be preceded by a less technical introductory section that is accessible to a wide audience. Papers that are only mathematics, without demonstrated applicability to Artificial Intelligence problems may be returned: a discussion of the work's implications on the production of artificially intelligent systems is normally expected.

Types of Paper

Manuscript Length

There is no restriction on the length of submitted manuscripts. However, authors should note that publication of lengthy papers, typically greater than forty pages, is often significantly delayed, as the length of the paper acts as a disincentive to the reviewer to undertake the review process. Unedited theses are acceptable only in exceptional circumstances. Editing a thesis into a journal article is the author's responsibility, not the reviewer's.

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The Research Notes section of the journal Artificial Intelligence will provide a forum for short communications with a quick turnaround for publication. The maximum length should not exceed 4500 words (typically a paper with 5 to 14 pages). The intention is that a note, if accepted, will have a guaranteed publication within one year of submission, aiming for 6-9 months. Some examples of suitable Research Notes include, but are not limited to the following:

crisp technical research aimed at

other specialists, e.g. a theorem or an experimental result; short position papers on AI methodologies or technologies;

a critique of a position or claim made in the literature;

an extension or addendum to an earlier published paper that presents additional experimental or theoretical results.

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The following types of contributions are currently published:

1. refereed book reviews;
2. refereed research field reviews;
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