



ARTIFICIAL INTELLIGENCE IN MEDICINE

AUTHOR INFORMATION PACK

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DESCRIPTION

Artificial Intelligence in Medicine publishes original articles from a wide variety of interdisciplinary perspectives concerning the theory and practice of **artificial intelligence (AI)** in **medicine, medically-oriented human biology, and health care.**

Artificial intelligence in medicine may be characterized as the scientific discipline pertaining to research studies, projects, and applications that aim at supporting decision-based medical tasks through knowledge- and/or data-intensive computer-based solutions that ultimately support and improve the performance of a human care provider.

Artificial Intelligence in Medicine considers for publication manuscripts that have both:

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- **Strong novelty of method and theory related to AI and computer science techniques.**

Artificial Intelligence in Medicine papers must refer to real-world medical domains, considered and discussed at the proper depth, from both the technical and the medical points of view. **The inclusion of a clinical assessment** of the usefulness and potential impact of the submitted work **is strongly recommended.**

Artificial Intelligence in Medicine is looking for novelty in the methodological and/or theoretical content of submitted papers. Such kind of novelty has to be mainly acknowledged in the area of AI and Computer Science. **Methodological papers** deal with the proposal of some strategy and related methods to solve some scientific issues in specific domains. They must show, usually through an experimental evaluation, how the proposed methodology can be applied to medicine, medically-oriented human biology, and health care, respectively. They have also to provide a comparison with other proposals, and explicitly discuss elements of novelty. **Theoretical papers** focus on more fundamental, general and formal topics of AI and must show the novel expected effects of the proposed solution in some medical or healthcare field.

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AI-based clinical decision making; Medical knowledge engineering; Knowledge-based and agent-based systems; Computational intelligence in bio- and clinical medicine; Intelligent and process-aware information systems in healthcare and medicine; Natural language processing in medicine;

Data analytics and mining for biomedical decision support; New computational platforms and models for biomedicine; Intelligent exploitation of heterogeneous data sources aimed at supporting decision-based and data-intensive clinical tasks; Intelligent devices and instruments; Automated reasoning and meta-reasoning in medicine; Machine learning in medicine, medically-oriented human biology, and healthcare; AI and data science in medicine, medically-oriented human biology, and healthcare; AI-based modeling and management of healthcare pathways and clinical guidelines; Models and systems for AI-based population health; AI in medical and healthcare education; Methodological, philosophical, ethical, and social issues of AI in healthcare, medically-oriented human biology, and medicine.

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2. If used, they should be numbered in the text, indicated by superscript numbers, and kept as short as possible.

Footnotes

Footnotes should be used sparingly. Number them consecutively throughout the article. Many word processors build footnotes into the text, and this feature may be used. Should this not be the case, indicate the position of footnotes in the text and present the footnotes themselves separately at the end of the article.

Artwork

Electronic artwork

General points

- Make sure you use uniform lettering and sizing of your original artwork.
- Preferred fonts: Arial (or Helvetica), Times New Roman (or Times), Symbol, Courier.
- Number the illustrations according to their sequence in the text.
- Use a logical naming convention for your artwork files.
- Indicate per figure if it is a single, 1.5 or 2-column fitting image.
- For Word submissions only, you may still provide figures and their captions, and tables within a single file at the revision stage.
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Formats

Regardless of the application used, when your electronic artwork is finalized, please 'save as' or convert the images to one of the following formats (note the resolution requirements for line drawings, halftones, and line/halftone combinations given below):

EPS (or PDF): Vector drawings. Embed the font or save the text as 'graphics'.

TIFF (or JPG): Color or grayscale photographs (halftones): always use a minimum of 300 dpi.

TIFF (or JPG): Bitmapped line drawings: use a minimum of 1000 dpi.

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- Supply files that are too low in resolution.
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5. If a scale should be given, use bar scales on all illustrations instead of numerical scales that must be changed with reduction.

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Illustrations

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3. Tables should be numbered according to their sequence in the text. The text should include references to all tables.
4. Each table should occupy a separate page of the manuscript. Tables should never be included in the text.
5. Each table should have a brief and self-explanatory title.
6. Column headings should be brief, but sufficiently explanatory. Standard abbreviations of units of measurement should be added between parentheses.
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For a book:

[2] R. Kowalski, *Logic for Problem Solving* (North-Holland, New York, 1979).

For a journal article:

[3]D.E. Heckerman and E.H. Shortliffe, From certainty factors to belief networks, *Artificial Intelligence in Medicine* 4 (1992) 35-52.

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[4] S.E. Fahlman, A system for representing and using real-world knowledge, MIT Technical Report AI-TR 450, Cambridge, NIA, 1977.

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[1] Van der Geer J, Hanraads JAJ, Lupton RA. The art of writing a scientific article. *J Sci Commun* 2010;163:51–9. <https://doi.org/10.1016/j.Sc.2010.00372>.

Reference to a journal publication with an article number:

[2] Van der Geer J, Hanraads JAJ, Lupton RA. The art of writing a scientific article. *Heliyon*. 2018;19:e00205. <https://doi.org/10.1016/j.heliyon.2018.e00205>

Reference to a book:

[3] Strunk Jr W, White EB. *The elements of style*. 4th ed. New York: Longman; 2000.

Reference to a chapter in an edited book:

[4] Mettam GR, Adams LB. How to prepare an electronic version of your article. In: Jones BS, Smith RZ, editors. *Introduction to the electronic age*, New York: E-Publishing Inc; 2009, p. 281–304.

Reference to a website:

[5] Cancer Research UK. Cancer statistics reports for the UK, <http://www.cancerresearchuk.org/aboutcancer/statistics/cancerstatsreport/>; 2003 [accessed 13 March 2003].

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