Advances in Approximate Bayesian Inference LaTeX Style Guide

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Abstract

Papers to be submitted to NeurIPS 2025 must be prepared according to the instructions presented here. Papers may only be up to **nine** pages long, including figures. Additional pages *containing references, checklist, and the optional technical appendices* do not count as content pages. Papers that exceed the page limit will not be reviewed, or in any other way considered for presentation at the conference.

1 Introduction

This is a sample article that uses the jmlr class with the wcp class option. Please follow the guidelines in this sample document as it can help to reduce complications when combining the articles into a book. Please avoid using obsolete commands, such as \rm, and obsolete packages, such as epsfig.[1] Some packages that are known to cause problems for the production editing process are checked for by the jmlr class and will generate an error. (If you want to know more about the production editing process, have a look at the video tutorials for the production editors at http://www.dickimaw-books.com/software/makejmlrbookgui/videos/.)

Please also ensure that your document will compile with PDFLaTeX. If you have an error message that's puzzling you, first check for it at the UK TUG FAQ http://www.tex.ac.uk/cgi-bin/texfaq2html?label=man-latex. If that doesn't help, create a minimal working example (see http://theoval.cmp.uea.ac.uk/~nlct/latex/minexample/) and post to somewhere like TeX on StackExchange (http://tex.stackexchange.com/) or the LaTeX Community Forum (http://www.latex-community.org/forum/).

1.1 Sub-sections

Sub-sections are produced using \subsection.

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Sub-sub-sub-sections Sub-sub-sub-sections are produced using \paragraph. These are unnumbered with a running head.

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1. See http://www.ctan.org/pkg/l2tabu

2 Cross-Referencing

Always use `\label` and `\cref` (or `\Cref` if at the beginning of a sentence) when cross-referencing. For example, the next section is Section 3.

3 Equations

The jmlr class loads the amsmath package, so you can use any of the commands and environments defined there. (See the amsmath documentation for further details.[2])

Unnumbered single-lined equations should be displayed using `\[` and `\]`. For example:

$$E = mc^2$$

or you can use the `displaymath` environment:

$$E = mc^2$$

Numbered single-line equations should be displayed using the `equation` environment. For example:

$$\cos^2\theta + \sin^2\theta \equiv 1 \tag{1}$$

This can be referenced using `\label` and `\eqref`. For example, (1).

Multi-lined numbered equations should be displayed using the `align` environment.[3] For example:

$$f(x) = x^2 + x \tag{2}$$
$$f'(x) = 2x + 1 \tag{3}$$

Unnumbered multi-lined equations can be displayed using the `align*` environment. For example:

$$\begin{aligned} f(x) &= (x+1)(x-1) \\ &= x^2 - 1 \end{aligned}$$

If you want to mix numbered with unnumbered lines use the `align` environment and suppress unwanted line numbers with `\nonumber`. For example:

$$\begin{aligned} y &= x^2 + 3x - 2x + 1 \\ &= x^2 + x + 1 \end{aligned} \tag{4}$$

An equation that is too long to fit on a single line can be displayed using the `split` environment. Text can be embedded in an equation using `\text` or `\intertext` (as used in Theorem 1). See the amsmath documentation for further details.

4 Theorems, Lemmas etc

The following theorem-like environments are predefined by the jmlr class: `theorem`, `example`, `lemma`, `proposition`, `remark`, `corollary`, `definition`, `conjecture` and `axiom`. You can use the `proof` environment to display the proof if need be, as in Theorem 1.

Theorem 1 (Eigenvalue Powers). *If λ is an eigenvalue of $\vec{B}$ with eigenvector $\vec{\xi}$, then λ^n is an eigenvalue of $\vec{B}^n$ with eigenvector $\vec{\xi}$.*

2. Either `texdoc amsmath` or http://www.ctan.org/pkg/amsmath
3. For reasons why you shouldn't use the obsolete `eqnarray` environment, see Lars Madsen, *Avoid eqnarray!* TUGboat 33(1):21–25, 2012.

Proof. Let λ be an eigenvalue of $\vec{B}$ with eigenvector ξ, then

$$\vec{B}\vec{\xi} = \lambda\vec{\xi}$$

premultiply by $\vec{B}$:

$$\begin{aligned} \vec{B}\vec{B}\vec{\xi} &= \vec{B}\lambda\vec{\xi} \\ \Rightarrow \vec{B}^2\vec{\xi} &= \lambda\vec{B}\vec{\xi} \\ &= \lambda\lambda\vec{\xi} \qquad \text{since } \vec{B}\vec{\xi} = \lambda\vec{\xi} \\ &= \lambda^2\vec{\xi} \end{aligned}$$

Therefore true for $n = 2$. Now assume true for $n = k$:

$$\vec{B}^k\vec{\xi} = \lambda^k\vec{\xi}$$

premultiply by $\vec{B}$:

$$\begin{aligned} \vec{B}\vec{B}^k\vec{\xi} &= \vec{B}\lambda^k\vec{\xi} \\ \Rightarrow \vec{B}^{k+1}\vec{\xi} &= \lambda^k\vec{B}\vec{\xi} \\ &= \lambda^k\lambda\vec{\xi} \qquad \text{since } \vec{B}\vec{\xi} = \lambda\vec{\xi} \\ &= \lambda^{k+1}\vec{\xi} \end{aligned}$$

Therefore true for $n = k + 1$. Therefore, by induction, true for all n. □

5 Citations and Bibliography

The jmlr class automatically loads natbib and automatically sets the bibliography style, so you don't need to use `\bibliographystyle`. This sample file has the citations defined in the accompanying BibTeX file `jmlr-sample.bib`. For a parenthetical citation use `\citep`. For example (Guyon and Elisseeff, 2003). For a textual citation use `\citet`. For example Guyon et al. (2007). Both commands may take a comma-separated list, for example Guyon and Elisseeff (2003); Guyon et al. (2007).

These commands have optional arguments and have a starred version. See the natbib documentation for further details.[4] The bibliography is displayed using `\bibliography`.

4. Either `texdoc natbib` or http://www.ctan.org/pkg/natbib

Acknowledgments and Disclosure of Funding

Acknowledgements go here.

References

I. Guyon and A. Elisseeff. An introduction to variable and feature selection. *JMLR*, 3:1157–1182, March 2003.

I. Guyon, C. Aliferis, and A. Elisseeff. Causal feature selection. Technical report, Clopinet, 2007.

Appendix A. First Appendix

This is the first appendix.

Appendix B. Second Appendix

This is the second appendix.