Logistic Regression with L_2 Regularization

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Abstract

The Abstract paragraph should be indented 1/2 inch (3 picas) on both left and right-hand margins. Use 10 point type, with a vertical spacing of 11 points. Two line spaces precede the Abstract. The Abstract must be limited to one paragraph.

1 HOW TO PREPARE CAMERA-READY COPY

The collected papers of the 1993 NIPS conference will appear as *Advances in Neural Information Processing Systems 6*, edited by Jack Cowan, Gerald Tesauro, and Joshua Alspector. Papers may be up to *eight* pages long. Final camera-ready copy is due at the publisher by January 7, 1994. The book should be published by April if everyone cooperates with these guidelines.

We are striving to produce a high-quality book with a uniform, professional appearance, rather than just a random collection of papers. Special LaTeX macros have been prepared to allow you to generate camera-ready copy in the same format as this instruction sheet. There are three ways you can obtain these macros:

2 SPECIAL INSTRUCTIONS FOR LaTeX USERS

The `nips.sty` file has been tested under LaTeX version 2.09. Times Roman is the preferred typeface, so you will want to use the version of LaTeX with PostScript fonts pre-loaded. On some systems this is called "pslatex".

You may want to use this instruction file `nips.tex` as a "shell" for writing your paper. All you have to do is replace the author, title, etc., with your own information. Please pay attention to the instructions at the end of this sheet regarding figures, tables, acknowledgements, and paper identification.

3 GENERAL FORMATTING INSTRUCTIONS

The line width is 5 inches (30 picas). The left margin is 1.75 inches (10.5 picas). Use 10 point type with a vertical spacing of 11 points. Times Roman is the preferred typeface throughout.

Paper title is 17 point, caps/lc, bold, centered between 2 horizontal rules. Top rule is 4 points thick and bottom rule is 1 point thick. Allow 1/4 inch space above and below title to rules. The first rule is 2 inches (12 picas) from the top of the page. Subsequent pages should start at 1 inch (6 picas) from the top of the page.

Authors' names are set in boldface, and each name is centered above the corresponding address. The lead author's name is to be listed first (left-most), and the Co-authors' names (if different address) are set to follow. If only one co-author, center both the author and co-author, side-by-side.

One-half line space between paragraphs, with no indent.

4 FIRST LEVEL HEADINGS

First level headings are all caps, flush left, bold and in point size 12. One line space before the first level heading and 1/2 line space after the first level heading.

4.1 SECOND LEVEL HEADING

Second level headings must be flush left, all caps, bold and in point size 10. One line space before the second level heading and 1/2 line space after the second level heading.

4.1.1 Third Level Heading

Third level headings must be flush left, initial caps, bold, and in point size 10. One line space before the third level heading and 1/2 line space after the third level heading.

Fourth Level Heading

Fourth level headings must be flush left, initial caps and Roman type. One line space before the fourth level heading and 1/2 line space after the fourth level heading.

4.2 CITATIONS, FIGURES, REFERENCES

These instructions apply to everyone, whether they're using LaTeX, TROFF, or some other formatter.

4.2.1 Citations in Text

Citations within the text should include the author's last name and year, e.g., (Cheesman, 1985). Reference style should follow the style that you are used to using, as long as the citation style is consistent.

4.2.2 Footnotes

Indicate footnotes with a number[1] in the text. Place the footnotes at the bottom of the page on which they appear. Precede the footnote with a horizontal rule of 2 inches (12 picas).[2]

4.2.3 Figures

All artwork must be centered, neat, clean, and legible. All lines should be very dark for purposes of reproduction and art work should not be hand-drawn. Figure number and caption always appear after the figure. Place one line space before the figure caption, and one line space after the figure. The figure caption is initial caps and each figure numbered consecutively.

Make sure that the figure caption does not get separated from the figure. Leave extra white space at the bottom of the page to avoid splitting the figure and figure caption.

Figure 1: Sample Figure Caption

4.2.4 Tables

All tables must be centered, neat, clean and legible. Do not use hand-drawn tables. Table number and title always appear before the table. See Table 1.

One line space before the table title, one line space after the table title, and one line

[1] Sample of the first footnote
[2] Sample of the second footnote

Table 1: Sample Table Title

PART	DESCRIPTION
Dendrite	Input terminal
Axon	Output terminal
Soma	Cell body (contains cell nucleus)

space after the table. The table title must be initial caps and each table numbered consecutively.

4.2.5 Identification

Make certain that your name is typed or written on the back of every page of your masters, and number pages sequentially. This information is for identification only. Final page numbers will be assigned by the publisher. If you have preferred wording for a long running head, please include this when you send your paper.

Acknowledgements

Use unnumbered third level headings for the acknowledgements. All acknowledgements go at the end of the paper.

References

References follow the acknowledgements. Use unnumbered third level heading for the references. Any choice of citation style is acceptable as long as you are consistent.

J. Alspector, B. Gupta & R. B. Allen. (1989) Performance of a stochastic learning microchip. In D. S. Touretzky (ed.), *Advances in Neural Information Processing Systems 1*, 748-760. San Mateo, CA: Morgan Kaufmann.

F. Rosenblatt. (1962) *Principles of Neurodynamics.* Washington, DC: Spartan Books.

G. Tesauro. (1989) Neurogammon wins computer Olympiad. *Neural Computation* **1**(3):321-323.