Universität Hamburg
Department Informatik
Knowledge Technology, WTM

Neural Networks for Artificial Agents

Seminar Paper

Knowledge Processing with Neural Networks

Horst Hansen
Matr.Nr. 6543210
hansen@informatik.uni-hamburg.de

01.09.2010

Abstract

This paper gives a brief overview and an example of how to write a seminar paper in LaTeX. Seminar papers are often seen as a review of an area research or as an overview over several approaches for a given problem.

Contents

1 Introduction

The introduction describes the problem, why it is important, the main ideas of the following paper, what are the main contributions of the paper, etc.

If the paper has more then 4 pages, a readers guide is recommenced. In a short paragraph an outline of the content of the next

2 Optional: Background Information

A brief section giving background information may be necessary, especially if your work spans two or more traditional fields. That means that your readers may not have any experience with some of the material needed to follow your thesis, so you need to give it to them. A different title than that given above is usually better; e.g., "A Brief Review of Frammis Algebra."

3 Related Work

The related work section could describe other work that is in some respects relevant for the understanding of the problem outlined in Section 1, that offer competing solutions, etc.

All sources must be properly referenced, ideally by using the BiBTeX system. References can then be very conveniently made with the CITE command. For example, reference [2] discusses some of the elementary rules on writing scientific papers, amongst others how to correctly cite other documents. Reference [1], e.g., describes how to correctly use the SI system of units and their correct typographical representation. In general you organize this section by idea, and not by author or by publication.

4 Model description

After the two (or maybe three) common sections Introduction (plus optional Background) and Related work, more sections with the actual content of a paper follow. The style and structure of such sections varies by a large degree, no general rules of thumb can be given.

4.1 Word processing with LaTeX

This document has already introduced the most important constructs of LaTeX. What is necessary to produce documents with LaTeXis simple any normal text editor and a LaTeXdistribution. This is commonly installed on practically all UNIX-type systems; for Windows, an excellent LaTeXexists, called MikTeX, available from `www.miktex.org`. Almost all distributions come with a large patch of examples and introductory material; consult your local installation for details.

Lots of supplementary and background information, FAQs, etc. is available from the Comprehensive TeX Archive Network (CTAN); the German mirror of which is `www.dante.de`.

4.2 Tables in LaTeX

Tables should be centred and should always have a caption positioned above it. A caption in a sentence form as well as in a short form must end with a period as seen in table 1.

Table 1: This caption has one line so it is centred.

Example column 1	Example column 2
Example text 1	Example text 2

4.3 Figures in LaTeX

Note that a figure is a so-called floating object: it is moved around the actual text in order to best fit on a page. This is in stark contrast to some GUI-based word processing tools, where the placement of figures is usually more associated with luck than principle.

As figures float around, expressions like "the following figure" must never be used. Instead, figures need a caption, a label, and must be properly referenced in the main text. A figure caption is placed centred below the figure and describes the figure in (very) short.

In general, only vector graphics in encapsulated postscript (eps) or a similar format should be included in any kind of text, as this allows arbitrary scaling, rotation etc. without any loss of quality. Bitmap formats (JPEG, GIF, ...) should only be used if no other alternative exists — basically the only case where bitmaps can be justified is when scanned pictures need to be included in a text, however, this should be avoided as hard as possible as the quality in usually not satisfactory. If a screen shot is needed a high resolution picture without visible fragments of a jpeg compression is allowed. Figures like the figure 1 should always appear after the first referencing it.

5 Model analysis

The analysis of a model is a much more free-form of a paper. Starting with a comparison of several approaches over some experimental settings and result up to a theoretical verification of the model, anything is allowed. But it all has only one purpose: to convince the reader of the right to exist of the described model.

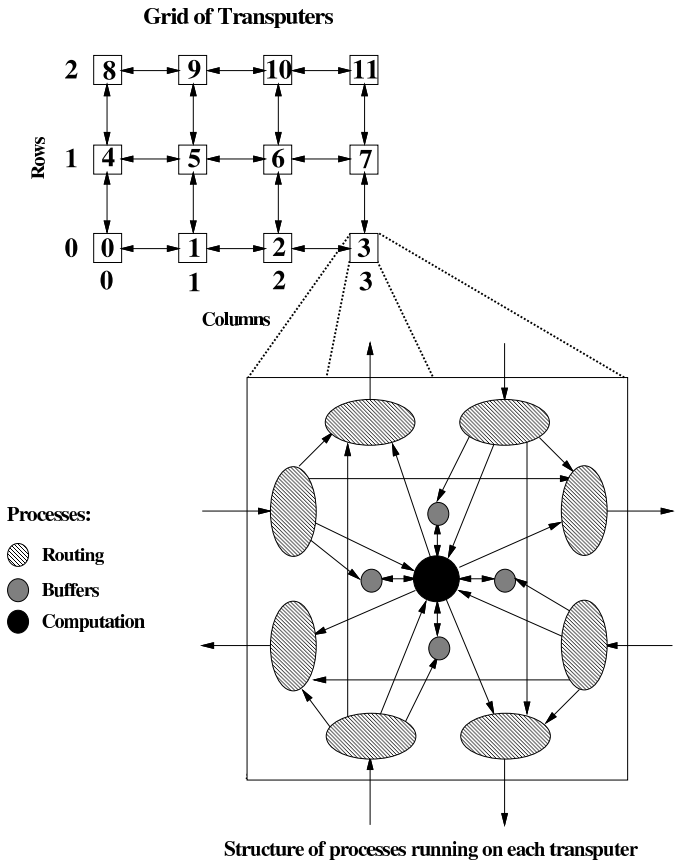

Figure 1: Network of transputers and the structure of individual processes.

6 Conclusion

At the end, there is a final section concluding and summarizing a paper, putting the entire work into perspective and explaining, on a larger level, what the consequence of this work are. Also, unexpected results can be discussed here, etc.

References

[1] B. N. Taylor. Guide for the use of the international system of units (si). NIST Special Publication 811, 1995. `http://physics.nist.gov/Document/sp811.pdf`.

[2] M.-C. van Leunen. *A Handbook for Scholars.* Oxford University Press, 1992.