My beautiful CI Project

Javier Beltrán JAVIERBELTRANJ@GMAIL.COM
Academic address (optional)

Guillermo Bernérdez GBG1441@GMAIL.COM
Academic address (optional)

Juan Lao NITZING@GMAIL.COM
Academic address (optional)

Jorge Rodríguez J.RODRIGUEZ.MOLINUEVO@GMAIL.COM
Academic address (optional)

Abstract

This paper analyses the performance of Hopfield Neural Network and Restricted Boltzmann Machine for several kinds of addressable content. In particular, it focuses on which of the algorithms has a better performance for each database defined by a certain property.
Keywords: Neural Networks, Hopfield Neural Networks, Boltzman Machine, Database,

1. Problem statement and goals

This is where the content of your paper starts. Remember:

- Limit the main text (without bibliography and appendices) to 10 pages.
- Include, either in the main text or the appendices, enough details to convince the lecturers of the project's merits.
- You should cite or give credit to all material that is not yours (including pictures, books, web pages, code, ...)

The main goal for this project is to analyse the performance of Hopfield Neural Networks and Boltzman Machines as content addressable memory system, for this we create a series of databases with a certain property each. We will focus on Restricted Boltzman Machines, since the learning procedure is impractical in General Boltzman Machines and their use is very limited. This paper will try to answer the following questions:

- Given a database with a certain property Which of both algorithm works best?
- Is there a way of improving this results?
- In which cases Holpfield Neural Networks should be used and in which Boltzman Machines?

The general problem to be solve is, given a database for which a content addressable memory system is needed, which of the two Neural Networks should be used.

Ack (1985)

2. Previous work

This is a very important part, because it puts your work in context.

3. The CI methods

Do not repeat well-known theory or formulas. Just mention which methods you use and why you choose them, and provide relevant citations.

4. Results and Discussion

The main part of the document.

5. Strengths and weaknesses

Be critic with your work ...

6. Conclusions and future work

The conclusions are not a mere repetition of the abstract. Basically, you should describe "what you know now that you did *not* before doing the work". In addition, mention what would be natural follow-up lines of work.

References

References

A learning algorithm for boltzmann machines. *Cognitive Science*, 9(1):147 – 169, 1985. ISSN 0364-0213.

Appendix A. Proof of theoretical results

(if applicable)

Appendix B. Implementation details

(if applicable)