

ECE 750/SDE625

Final Project for M. Eng. Students

Due date, August 3, 2012 (before 11:30am)

Instructions

The final report should be 10 to 12 pages length according the style and format outlined in [this link](#). The report should include (besides the name and affiliation) an abstract, an introduction, background of the problem and literature review, fundamentals of the technique(s) proposed to solve the problems, simulation (experimental results) and concluding remarks. The report should also include as many references as possible. Please check any IEEE, ASME, or any other transactions or journals for help in writing articles.

The main goal of this exercise is to have the student produce a report that looks as much as possible as a journal article ready for submission.

The final reports are due on August 3, 2012 (before 11:30am) and should be uploaded on line in the folder final with the title finalproject_yourlastname.doc and finalproject_yourlastname.pdf and finalproject_yourlastname.zip (including all files and matlab files you used to run the programs). The upload ftp site is located at <ftp://pami.uwaterloo.ca> (username:ece750s10; password:750s10). Use a dedicated ftp program such as the ftp explorer (rather than using IE or chrome web browser). Note that files you upload should be in the correct directory. Files that you upload will be hidden as soon as you upload them.

Final Project

We would like to investigate how to use genetic algorithms for neural networks. The requirement from students is to read some literature on the subject and then write up to 12 pages report (in the same format as the one for the paper analysis). The report needs to include the following:

- Abstract
- Introduction
- Various aspects of using GA for Neural Networks (literature review)
- GA for optimization of Neural Networks (as an alternative to gradient descent)
- Simulation/Application for an example of your choice (either classification or function approximation)
- Analysis of the Results (with the use or without use of GA)
- Conclusion

You may wish to use some of the link below:

<http://www.cs.colostate.edu/~genitor/MiscPubs/gann.pdf>

http://www.itba.edu.ar/nuevo/archivos/secciones/art_revistas_46.pdf

http://www.generation5.org/content/2000/nn_ga.asp