

## 6.872/HST.950 Project Paper Notes

Please write the report in Word format. It is never too early to start to write intro/background or methods sections. Often, the difference between good and excellent report is the references and nice figures with high image quality. Style should be in active voice, 'we' form. Information on actual code, etc. written can be fully explained in supplementary information section.

1. **Format:** Papers generally have the following format:  
Abstract, Introduction, Background, Results, Discussion and Conclusion, Methods (and Materials), References, Supplementary Information. In Nature letter article format (recommended here), the Methods section appears near the end (after Discussion and Conclusion) and there are no headings. However, for this project report, it may be easier to organize by the above headings to improve readability (with "Methods" still being after "Discussion and Conclusion"). A Word template for Nature letters can be found here:

<http://www.nature.com/nature/authors/submissions/template/index.html>

Note that each journal page is approximately 1300 words. A letter is typically 1500 words. A full article is 3000 words. However, this does not include supplementary information- which can sometimes be a dozen or more pages. The actual "letter" portion should be elegant and intuitive. Yet, make sure to be complete- so if information is highly technical, include that in supplementary information portion.

More information available here:

<http://www.nature.com/nature/authors/gta/index.html#a5>

An abstract is important since it is the first exposure of the reader to the paper. An example Nature article abstract (with annotation describing the writing process) can be found here for articles:

<http://www.nature.com/nature/authors/gta/index.html>

[Or, you can use this template for a Nature letter-based summary abstract if preferred: [http://www.nature.com/nature/authors/gta/Letter\\_bold\\_para.doc](http://www.nature.com/nature/authors/gta/Letter_bold_para.doc) ]

2. **Figure/Image Quality:** For good press-quality figure image quality:  
In Matlab, Visio, etc: Save figure as \*.emf enhanced metaformat file (not bitmap such as jpeg, gif, etc).

In Word: Insert ->From File->(select the \*.emf file)

Now, you can stretch/crop the picture without losing image quality.

The crop icon is the one that looks like a square (use help in Word for assistance).

(This is also better than copy/paste which is generally bitmap format (unless you do an enhanced metaformat copy and paste special with enhanced metaformat (more complicated.)

3. **Flowcharts:** Flowcharts are very useful for giving the reader a broad overview of any methods used in the work. It is highly recommended that a flow chart is included in the background or methods section. By referring to steps of the flowchart in the text of the paper, this can also make it easier to structure the writing of the paper itself.
4. **Editing Figures:** Figures should be readable in gray scale if printed. How images will appear grayscale can be seen from Picture toolbar of Word (Menu: View->Toolbars->make sure "Picture" is checked. In that toolbar, click on double vertical shaded bar icon to change to grayscale to see how it looks. For graphs, being able to distinguish between data series may require having one be a 'o', another an 'x', etc.- or dotted/solid lines (rather than different colors).
5. **References:** You can search for biomedical related references here at pubmed: <http://www.ncbi.nlm.nih.gov/entrez/query.fcgi>  
  
CS references (Need to be manually typed into Endnote):  
<http://www.informatik.uni-trier.de/~ley/db/index.html>
6. **Importing References:** Here is info on 1. Automatically inserting pubmed references into Word document for report and 2. inserting automatically updating figure/table numbers and cross-references.  
Recommended bibliographical format (can be selected in Endnote) is: "Nature" journal format (Endnote Menu: Edit->output style)

There are two methods to automatically download pubmed citations into Endnote (and hence Word). I use the second one.

Note: you can download Endnote for the purposes of this class here:

<http://www.endnote.com/endemo.asp>

Download/Import Method:

a. In PubMed:: With your desired records on-screen, change the Display to the MEDLINE display format. Then select Send to - File within PubMed and save the file to your local computer. Be sure to remember where you saved the file and what the name was.

b. In End-Note: Choose the PubMed/NLM import filter. If you use EndNote version 7 or earlier, you may need to get an updated Import Filter for Pubmed.

Latest PubMed Import Filters: Windows - Mac Connect Method: In EndNote, choose Tools/Connect and select PubMed (NLM). Note: Users of EndNote 6 need to get a software patch to use the Connect tool with PubMed. See the EndNote PubMed page for details.

For more info:

<http://scilib.ucsd.edu/bml/bibsoft.htm>

7. **Figures and Captions:** For figures and captions, here are directions: Use Word commands "insert"-">"reference"-">"caption" for figures (and write caption for each figure). Then, you can use the following command to refer to the figures:  
"insert"-">"reference"-">"cross-reference"-">"Reference Type" set to Figure, "Insert Reference To" set to "Only Label and Number" The result is that it automatically tracks figure numbers (which can be a big issue as paper gets large).
8. Use Matlab and Word.
9. Please email copy of final report electronically as well (Word format).
10. Email if need computer access to Visio (for flow charts, etc), misc. programs, or other Matlab toolboxes. You can also use PowerPoint instead for flow charts, etc...

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