ECE532 – Final Project

Kyle Daruwalla
daruwalla@wisc.edu

Davis Gilton
gilton@wisc.edu

Shuoyand Qiu
sqiu26@wisc.edu

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Abstract

This short section (about 1/2 page) should clearly explain what the project is about, which machine learning techniques are explained and utilized, and what a reader can expect to learn and accomplish if they follow along and work through the examples and problems. This is a very important part of your project, because its the first thing the reader sees. Be clear, be concise, and use this opportunity to convey what makes this project interesting/unique/cool.

0.1 Background

This section should explain the context for the main idea behind the project (you may divide this section into multiple subsections if it helps with readability). Start with a description of the problem that will be solved, a brief history (with citations) of how the problem came about, why its important/interesting, and any other interesting facts youd like to talk about. Feel free to use images/diagrams/etc. from research papers, the internet, or other sources to help with your explanation, so long as you cite your references. Finally, the background section should also give a mathematical description of the problem, with equations as needed.

0.2 Warm-Up

This section should pose a few (3 or 4) short problems. Think of this as a way of testing whether the reader was paying attention while reading the previous section. These can be math problems, or computational in nature. Either way, they should be short-answer problems, not too difficult, and should serve to prepare the reader for the more difficult tasks that lie ahead. For example, if the reader is expected to use a particular Matlab package later on, this would be a good place to introduce that package and give a simple problem to solve. Solutions to the warm-up should be included in the appendix.

This might be a good place to split into subsections

0.3 Lab

This is the main section of the report. It should contain 3 to 5 longer tasks that call on the reader to solve, analyze, visualize, and discuss problems related to the main theme of the project. Each problem may be accompanied by additional explanations if necessary (you can also use multiple subsections if it helps). The problems dont need to be in a list; you may elect to intersperse the problems within your text but be sure to clearly label them so the reader knows what theyre being asked to do. With regards to format, use your best judgement for what makes your report most readable. If you are using external data files/sources, be sure to address and explain where the problem data is coming from (research? the internet? synthetically generated?). Complete solutions to the lab problems should be included in the appendix.

This might be a good place to split into subsections

Bibliography

[1] L. Lessard, "A fake bibliography item to serve as an example," *Journal of Lies*, vol. 1, 2016.

Appendix A Sample Appendix

This section contains complete solutions (including code, figures, etc.) for the warm-up problems and for the lab. If virtually the same code is used to solve different problems, there is no need to include the same code twice. Just make a note of what is different. Points for this section are counted as part of the Warm-up/Lab.

```
A = ones(2, 1);
B = ones(3, 1);
C = A' * B;
```