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Peer review, lab 1

1. Are the data sets presented clearly? Are the procedures to acquire data described in enough detail for the experiment to be repeated by someone else?
The data sets, i.e. the recorded inputs, are presented in a clear way in all the three assignments. Enough descriptions are provided, so the inputs can easily be reproduced.

When it comes to figures, all of them have a good size which makes it easy to read and see the smaller details. However, some of the figures are missing unity in the y-axis.

2. Is there a clear explanation of the solutions of the tasks in Section 4–6? Discuss each task separately.

Task 1 - Whistle
The method and the results in this task are well described. The necessary equations are presented and referred to, and the figures complete the written explanations. Well done!

One minor fault is that equation (1) is not an equation, i.e. there's no equality sign. Another minor thing is that the signal purity in the lab description is described as $1 - \frac{E_{dom.freq}}{E_{tot}}$ instead of just $\frac{E_{dom.freq}}{E_{tot}}$ as it is written.

Task 2 - Vowel
Both the method and result of this task are finely described. The equations are helpful for understanding the theoretic background, and the figures illustrate well the achieved results. A good analysis of how the residuals' covariance is also helpful to understand the result obtained in figures 6 and 8. Nicely done!

A minor fault is that figures 5 through 8 are missing description in the y-axis.

Task 3 - GSM
The method for task 3 is descriptive and it's relatively clear how the solution was implemented. The steps can easily be followed to reproduce the experiment by someone who has knowledge on the subject. Some parts seem to be missing, for example there is nothing about varying the model orders and changing the amplitude. This should also be present in the method.

In addition there really isn't any result described, which it definitely feels like there should be. The result of the task is somewhat described in the conclusions, which is out of place, and the description isn't very thorough. To improve this there could be a subsection result and a subsection method under the GSM section. The subsection "result" should then contain a description of what the results were, e.g how it sounded, if some orders were better than others, maybe a figure of the real signal and the reconstructed one etc.

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3. Are the conclusions well supported by the data, the experiment and the results? Do you agree with the conclusions? What would you like to add to the conclusions, based on the data and the results of the task?

The conclusions are well supported by the data for the most part, however e.g in task 3 there is no result, and no actual data presented outside of the conclusion section. This should be resolved. Other than that all the conclusions are valid and supported. The conclusion section is also quite extensive, which is very nice.

4. What is a particular strength in this lab report? Discuss the content, not the format.

When reading the report one strength that stands out is the theory present. The equations are generally correct and they support the entire report. The figures are also very good and provide a nice visualization of the results. The text is well put together and quite easy to read aside from some grammatical errors here and there. Finally the conclusion section highlights some interesting conclusions from the different tasks.

5. What suggestions can you make for improving the overall quality of the writing in this report? Discuss clarity, readability and technical accuracy.

The suggestions are presented below:

- Add references to where the equations come from and to the lab description. This improves technical accuracy.
- Improve the abstract by making more specific to the lab's three assignments. Sentences like "*different types of sound*", "*various situations*" and "*simple methods and algorithms*" are overly general.
- Too long and unspecific title.
- Some grammatical errors and inconsistencies are present in the report. An example of grammatical errors is that sometimes "an AR-model" is used and sometimes "a AR-model" is used. An inconsistency is for example "AR model" and "AR-model", both are used.