MATH 436: PORTFOLIO PROJECT PEER REVIEW

Project Title: Modeling The Effects Of Air Quality From The Great Salt Lake

Project Authors: Japheth Carlson, Nathan Longhurst, Rowan Williams

Instructions

(1) For each category mark Y or N for each of the subquestions. (2) Give a point score for each category, and a justification for your score, including *at least two thoughtful comments* about how the project does or does not fulfill the requirements for that category.

(3) If the project needs improvement in some area, please say so—if the authors don't know there is a problem, they can't improve. But say it without harsh or unkind words.

Good example: "The Kalman filter might not be the right tool for this problem because..."

Good example: "Your graph doesn't seem to show what you claim it shows. Instead it looks like it shows..."

Bad example: "Using the Kalman filter here is stupid because..." Bad example: "I can't believe you think your graph shows that, when it clearly says this instead."

Compliance with Instructions:

- Y/N Did the authors use the LaTeX template that was provided? Y
- Y/N Did they comply with the rule to leave the margins and fonts unchanged from the template? Y
- Y/N Does the project have the required length (not more than 10 pages, excluding the bibliography) Y
- Y/N Does the project have the required format (Abstract, Back ground and Motivation, Modeling, Results, Analysis and Conclusions)? Y

Score: 10/10
Reviewer's Comments: They have compiled with the instructions

Questions: Background/Motivation and Problem Statement.:

- Y/N Does the paper give an adequate explanation of the background for the problem that the group is considering? Y
- Y/N Does it explain why this problem is interesting, and what tech niques/methods have been previously used (if any) for this problem or similar ones? Y
- Y/N Does it adequately explain how this paper fits into existing research? Y
- Y/N Does it properly cite all the appropriate references? Y

Score: 8.5 /10
Reviewer's Comments: I really love the last paragraph in your intro. It does a great job at explicitly stating what you will accomplish.
You could do more with point two. You mention this other lake that has dried up but don't go into much detail about how they have modeled particulate spread or if they have.

Modeling:

- Y/N If the authors have developed a good model, have they justified it well? Considered the potential strengths and weaknesses of the model? Have they considered other models that might be natural candidates and explained why those are not as good as the one they settled on? Y first half N second half
- Y/N If they have not succeeded in developing a good model, have they done a good job of documenting that the natural candidates are not suitable and why they are not suitable? Shown that they have thought deeply and looked carefully to try to find a good model? They got a great model
- Have they considered the simplifying assumptions of each model they explored. Have they made a good case that they thought about the implications of those assumptions? (what happens if they are changed?) Y
- Y/N Have they included numerical simulations for each model they explored? Y

Score:20 /25

Reviewer's Comments: Should the first sentence be at a specific location? It asks if you have talked about other models and why they are not as good which I did not see. Id give it a 23 after you fill in everything you say you will fill in. I love how you document the journey to get to your model and all of the simplifying assumptions.

Results:

- Y/N Have the authors clearly and succinctly stated and described the conclusions that can be drawn from the model they have achieved (or the the many failed attempts)? Y
- Y/N Have they shown that their model(s) perform well quantitatively or qualitatively? Y

Score:7 /10

Reviewer's Comments: Maybe make the graph bigger. I couldnt zoom in enough to read the labels. Maybe that is just my computer tho. You state your findings but it would be nice to be shown a little more how your model got you to those findings. If possible quantitative results would be great.

Analysis/Conclusions:

- Y/N Have they discussed their success or failure at modeling the chosen phenomenon? Y
- Y/N Did they describe different steps they could have taken if they had more time? Y
- Y/N Did they describe well what they learned about the techniques and method they used? Y
- Y/N Did they describe well what their various modeling attempts and final model teach us? N

Score:8 /10

Reviewer's Comments: I love how you show this data it is very helpful. But it seems like most of it comes from online resources. It would be nice to show more of the results your model would get

Graphics: Effectiveness and Quality:

- Y/N Are the graphics appropriate and well thought out? N
- Y/N Are they of high quality (not sloppy, pixelated, blurry, tiny, or huge?) N
- Y/N Are they uncluttered and easy to understand (with complete and helpful captions and labels)? N

Score:4 /10

Reviewer's Comments: Again couldnt read the labels. But I am sure that once you put in the other graphics that you have hinted at they will be great.

Knock my Socks Off: Does this project impress you? Does it make you want to hire this team to work for you? Why or why not?

Score: 11/10

Reviewer's Comments: I would hire any/all of you. I love how you bit off such a big real problem. You came across many road bumps but it is still very impressive. With the right resources it seems like this would be worth any employers time