



## Rebuttal from Group 11

### Group Members:

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## Summary:

Firstly, we appreciate all classmates, professor, and tutors for carefully reading our group's report and also thanks for their suggestions. We carefully go through the summary, strengths, and weaknesses raised by our classmates. The average overall rating for our group project is 4, while the highest is 5 and the lowest is 3. As for the deficiencies, here are our responses.

## Responses:

### Peer Review 1

As for Peer Review 1, our classmate gave us an overall rating of 5. Thanks to this classmate's recognition. Also, this classmate mentioned that other methods like XG-Boost could be added to our report. We tried to use XG-Boost to fit the feature vector after PCA's dimensionality reduction, however, in the process of adjusting parameters, we found that there seems to be no global optimization solution with this data set. As a result, our program failed to find the optimal solution of corresponding parameters and prediction models during the operation. We will accept this suggestion and try to find out the solution furthermore.

### Peer Review 2

1. In Peer Review 2, our classmate said that although we tried 2 methods to select the features, we still failed to find a suitable method. As a result, we used all variables instead. We thought our classmate misunderstood us; the detailed explanations were given in Part 2-Feature Selection in our report. Considering of the balance of computational efficiency and result, we select the Logistic Regression with our optimal accuracy.

As for the first method, the Principal Component Analysis (PCA), our report has already specifically explained why we abandoned the method PCA. We set components equal to 20, 50, and 100, and the scores are 0.41381, 0.44168, and 0.43019 respectively. Since these scores are all unsatisfactory, we determined to use other methods instead, which means, we did not blindly decide to use all variables in the dataset but after many times of experiments.

As for the method 2, we also provided the failed reason and detailed explanation in Part 2. We will try to figure out the reason furthermore.

2. As for the spelling mistake, we have already corrected all of them, which are some tiny grammar mistakes, but thanks to pointing it out.
3. In peer review 2, our classmate gave us a rate of 3 out of 5 for evaluation on technical quality. We want to argue for this rating. The report of our project 1 contains 8 pages with 6 separate parts in total, which accurately describes our methods and processes. As for the technical part, multiple methods and detailed processing of datasets were used, and each result is sufficiently supported by experiments. Therefore, our group believes that we shall have a higher rating for this part and hope professor and tutors could help us to re-evaluate this part later.

### **Peer Review 3**

As for Peer Review 3, our classmate gave us an overall rating of 4. Really thanks to this classmate's suggestions. He mentioned that the typesetting of our report is different from the typical latex model provided by the professor. We accept this suggestion and adjust our typesetting. In the new version of our report, we use a more formal and clear typesetting.