CSE 450 – Case Study Performance Evaluation

Treat the questions in this evaluation like a professional document you would send to an executive team during a post-mortem. Write in complete sentences, using correct grammar and spelling.

1. During this module, what are three key ideas you learned during this case study related to machine learning and data analysis?

The first thing I learned was that you need to be sure to make training, testing, and validation sets to make sure the model is working how you intended it to. Something to remember is that sometimes the best model for the testing set may not be the best model for the holdout set, this can be for various reasons. Finally, normalization, normalization rescales numeric values to fit on a scale between 0-1. The potential issue with this is that the max and mins can be different between the train/test set and the holdout set.

2. Choose one of your answers to the previous question and write a one-paragraph summary of that concept or idea as if you were teaching it to someone else.

Normalization is a good strategy to use especially if you have a lot of numeric data where the order does not matter (nominal data). Normalization is the process of rescaling numeric values to fit on a scale between 0-1 thus eliminating any weight those values may inadvertently hold. Normalization helps us bring all these features to a similar scale so that they can be compared and used together more effectively.

3. If you had additional time to work on this case study, what are two things that you would you do to take things further?

I would like to incorporate more external data such as income level or local school ratings. Both these items can affect the price of a home and I would be interested in seeing how. Another thing I would do would be to learn how to use the For loops shown in class to iterate through different model parameters. This would allow us to create the most effective model possible by going through all our options.

**4. Aside from having to learn a new and/or difficult concept, what do you think was the biggest obstacle your team faced during this case study?**

The biggest obstacle was creating features that would help our model more. Some of our features were good ideas but they did not impact the model significantly because they were too similar to some of the base features already in the data. In short, the hardest part was making original features that were significant.

**5. What are two insightful things you learned from hearing about what the other teams did?**

I really liked how one team used an API to pull more data into their model. This was very interesting because it leveraged other skills and creativity that the team had. While another team created many models with different data and showed the R^2 values of both their testing and validation sets and how the models compared against each other.

6. What insights did you gather about learning in general from this module? Could these insights apply to spiritual learning? If so, how?

One important thing I learned was that while data exploration is important, it should not overshadow the overall project. I had tunnel vision while doing my data exploration and it pulled me away from the big picture. Losing sight of the ultimate goal can be harmful especially in a team setting where people are counting on you to add your part. Like the gospel where if we become hyper focused on an aspect of doctrine or history that does not our personal progression, we can get bogged down and forget the ultimate goal.

**7. Review again this class's team guide,** [**Team Project Expectations**](https://byui-cse.github.io/cse450-course/course/projects.html)**. Then read** [**this article**](https://www.booksatwork.org/teamwork-productivity-collaboration-psychological-safety/) **on research done at Google on working effectively in groups or teams. Have you ever been part of a group that was exceptionally good or bad? Why do you think it was so?**

In a class I took last semester we were working in groups. My group was made up of some very intelligent people, but we did not work well together. One main reason for this was poor communication between team members and unclear goals and mileposts we needed to meet. In our current group, things are a lot better, we have clear communication and its also evident that we want to work together to achieve the same goal.

**8. Read** [**D&C 88:121-125**](https://www.churchofjesuschrist.org/study/scriptures/dc-testament/dc/88?lang=eng&id=121-125#p121) **and** [**D&C 121:41-44**](https://www.churchofjesuschrist.org/study/scriptures/dc-testament/dc/121?lang=eng&id=41-44#p41)**. Based on what you read in these scriptures, what are TWO specific things you can do to improve your interactions with your team? How could you be more intentional about listening to your quieter teammates? Or, if you are quieter, how could come prepared to speak up and participate more?**

One thing I can do is to make sure that everyone gets a chance to share what they have found and their solutions to whatever issue we are facing. I have noticed that the quieter members of teams I have been on have had some of the best solutions, but they refused to speak up. Something else I can do is encourage those who are quieter, including myself, to share at least one insight per issue faced. This way we can hear from and listen to many different points of view.

**9. You should have received an email from the TEAMMATES web app for you to enter your personal and team evaluations for this module. (If not, you should email Brother Allred to fix this.) Before submitting this document, go complete the TEAMMATES online feedback survey. Did you complete the online TEAMMATES evaluation survey?**

**Yes.**