

## Criterion E:

### *Methods of Data collection:*

- Observation [ 0 ]
- Interview [ I ]

Through the interview with the client, he expressed his satisfaction to the solution saying that “it met the specifications discussed at the start of the process” (Baker 2020). He appreciated the aesthetic of the graph and how fluid the navigation through the system was. According to my client, my system was effective at performing what he wanted in the system. He mentioned that the system was easy to use and he particularly enjoyed the clarity of the graphs, and how he “could just press the “edit” button and enter in the grades in those boxes then press done” (Baker 2020).

### ***Evaluation of System against Success Criteria:***

- This table summarizes the clients evaluation of the system.
- This table evaluates system against success criteria in A

| <b>Success Criteria</b>  | <b>Evaluation</b>   |
|--|---|
| The client must be able to enter, edit, and delete student grades  | [ 0 ] The Client was able to enter, edit, and delete grades. The client was also able to enter grades from any time using my intuitive system.  |
| The client must be able to provide fluent transition between pages: within 3 clicks a user should locate anywhere                          | [ 0 ] The User could make an account, and reach the teacher page in 3 clicks; created a class in 2 clicks; added a student in 3 clicks. Some explanation of the system beforehand was required.   |
| The system should be able to display a trend graph of student grades against time  | [ 0 ] The Graph displayed the trend of the grades they entered. He particularly enjoyed the focus and the aesthetic of the graph. It displayed the grades as he entered them, and he was very pleased. The Trendlines were easy to see. My client could clearly see the trends of each student they entered grades for. However, he thought the two prediction lines were the upper bounds and lower bounds of the prediction (Baker 2020), instead of two different predictions. |
| The system should be able to accurately predict the grade of a student in a specific subject, and allow the teacher to have some influence | [ 0 ] The client was able to view the automatically generated predictions. He “liked most that despite all of the numbers and graphs, there was still a composite predictive grade for me to just see” (Baker 2020). However, the teacher had no influence on the final grades after the system predicted it.   |

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| The system should be able to prevent the input of invalid data, incorrectly formatted data, or wrong data: there should be proper error management when data is inputted | [ 0 ] The system did not crash. All errors were validated. Grades were only allowed to be 1.0 to 7.9. He found the aesthetic of <b>bolding</b> the numbers to signify an invalid input as slightly “abrupt” (he meant confusing) (Baker 2020). Nonetheless, this was validated successfully. This was an advantage to the system. |
| The client must be able to contact a student regarding any matter  | [ 0 ] The Teacher was not able to contact the student in any form. Although they mentioned it wasn’t crucial, it would have been a good feature to include. Explanation in B  |
| The client must be able to download/export student grades in easily accessible comma separated value files   | [ 0 ] The client was able to press the “Create SpreadSheet” button to download four different spreadsheets into his computer with relevant data about his classes and students.   |
| The client should be able to add all their Classes and Students to classes, with data separate from each student.  | [ 0 ] The client was able to create two classes, and add pre-created students to them using the systems search function. He noticed that there wasn’t a “Back” button from the create class page, so this was a flaw in the system (Baker 2020).  |
| The system should automatically save data so that the system does not reset every time the application is closed   | [ 0 ] The system re-loaded and retained all data when the client shut the system. All data was retained.  |
| The client should be able to obtain the grades of a student by searching through firstname, surname, or ID   | [ 0 ] My client enjoyed that search for students was interactive, that the options updated as each key was pressed. He wasn’t able to search through ID, only my firstname and surname (Baker 2020).  |
| The system Java Application must be less than 5GB total.   | System in less than 1.4 GB  |

## Recommendations for Future Improvements:

### Client Recommendations:

Add a help page so that the client can understand what to do)

My client recommended that I add a page to explain what each of the numbers meant. In my system, I used a lot of abbreviations as labels for numbers, for instance, “Sems”, which he found confusing. Adding a help page can help my client, and any future user for that matter, to understand the system better.

Contact Students feature)

My client recommended that adding a feature to contact students is very viable to notify the student if their trend, shown in graph, is declining (for instance). As each student also has their own account, this could be simple to implement.

Class Average Trend Line)

My client suggested that on the graph there should be a line that represents the class average to allow the teacher to compare each student in the class to the class average.

**Self Recommendations:**

Email users the CSV files when “Spreadsheet” Button is pressed)

The spreadsheets that my system creates could be sent to any email assuming that it is inputted into the system. All four spreadsheets can be sent to any email, which increases the functionality of the system, and can possibly be more convenient for the teacher if they wish to share data with others.

Ability to update models using client data)

A main advantage of using neural networks to predict grades is that they have the possibility to improve accuracy as more grades are entered. However, currently, I haven’t created the system to append more data to training data, and retrain the model with that new data. So, a viable improvement can be to allow the teacher to retrain the prediction models with his own students data, so that the predictions are more accurate to his own students.

More Data)

Because this is machine learning, all my system needs is more data, so that it has more data to train and get more accurate.

Word Count [424]