

### Individual Contributions:

Our team worked collaboratively on most aspects of this project, most notably the goals, data preprocessing decisions, issues, and possible improvements of our project. Members did, however, helm some sections to streamline efficiency. I was largely responsible for the decision tree and MLP classifiers. Angela Zhang mostly worked with the KNN classifier and troubleshooting the issue of only predicting two labels. Kyle Sung handled researching relevant literature and sources. Nicholas Martz focused upon applying a logistic regression classifier to a multiclass problem. Preston Wong coded the data preprocessing decisions we came to a consensus to with visualizations.

### Group #31

The goal and motivation of this project, recommending a cluster of businesses that a user might enjoy (food-wise or exploration-wise), is made clear. The aspect I most enjoyed about this project was the inclusion of a filtering method for less active reviewers, because, although much more difficult to provide recommendations for, this demographic is still highly relevant to the goal and motivation of this project. I also appreciated the inclusion of how you decided upon the number of clusters you ended up using for this number is critical in solving the goal of this project. Utilizing a K means algorithm was icing on the cake, because of this algorithm's extreme relevancy to this class. However, this project could have been made clearer by further examining the features of this dataset (it seemed to be comprised of largely business types). Additionally, this project could have possibly made use of additional features like traffic around that area. Besides these nitpicks, this was an excellently executed project! Well done!

### Group #30

The goal and motivation of this project, determining the best supervised learning algorithm for recognizing handwritten digits, is made clear. The aspect I most enjoyed about this project was the clear results; SVM was shown to be clearly the best method to solve this issue with a side-by-side analysis. I also enjoyed how in-depth each model was examined (pointing out parameters used and algorithm weaknesses). I also appreciated the visualizations provided with

the methods and results. They helped me better understand your explanations and capture my attention. However, this project could have been made more interesting by not using the robotic speaking voice. Lacking the nuances that human speech does, the robot speaking voice has more difficulty holding my attention. Another nitpick would be that providing a better figure for KNN, such as a visualization of the clusters, would improve that section. Overall, though, excellent work!

#### Group #41

The goal and motivation of this project, to classify handwritten digits using the K means algorithm, is made clear. The aspect I most enjoyed about this project was the inclusion of your own method that combined the K means and SVM algorithms; it made your project more unique and demonstrated your knowledge of the subjects well. I also appreciated your analysis on why certain issues appeared (four looking similar to nine). The use of K means in general was also appreciated, because this algorithm is very related to this class. However, this project could have been made clearer by using bullet points of pseudo code instead of simply showing blocks of actual code. I also would have appreciated visualizations of the data or results of some sort. This would have given your presentation a more complete feel to it. Overall, though, excellent job!

#### Group #8

The goal and motivation of this project, classifying flowers using the PCA and CNN algorithms, is made clear. The aspect I most enjoyed about this project was the discussion about the drawbacks and failures of the two algorithms, because it demonstrated a good understanding of these methods and provided useful insight to the viewers. Also, it was a pleasure to see PCA used in this project, because of its massive relevance to this class. I also appreciated the side-by-side results of the flower accuracies, because it made direct comparison easy. Although a minor nitpick, providing this same side-by-side comparison between PCA and CNN would have also been useful. Secondly, I did not find moving between screens to point out that data was

manually pulled to be all that necessary; I think this portion could have been shortened.

Overall, though, this project was well presented and well thought out. Good job!