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ENGR 421
Homework #1

1) Firstly I wrote a code to read the data. After that, I divided the data sets into two groups consisting of 200 people's data. I named them as x_test, x_training and y_test, y_ training.
2) To obtain parameters such as means, deviations and class probabilities we applied some functions that we have done during the Lab01. Since Lab01 materials were valid for univariate cases, I adopted the code to 4096 row by using colMeans code. Class probabilities were basically the same with the Lab01. I assigned those as means_training, sample_deviations, clas_prob matrices.
3) When it comes to score function, I applied the code in the Lab01 and adjust it to multivariate case. Since we had a naïve bayes, the log of the multification of pixels will turn to summation of pixels for each class. At the end, we will add log of class probabilities. In the end, I obtained the score values of pictures for each classes. I added those score values as column of a matrix.
4) According to score function, I assigned the pictures to the class giving the maximum score function value.
5) I also used the Lab03 material to apply confusion matrix code. I adjusted it according to 1 or 2 case instead of 1 or 0.
6) I applied 3,4,5 to the training data as well. I obtained the confusion matrix for the test data.