

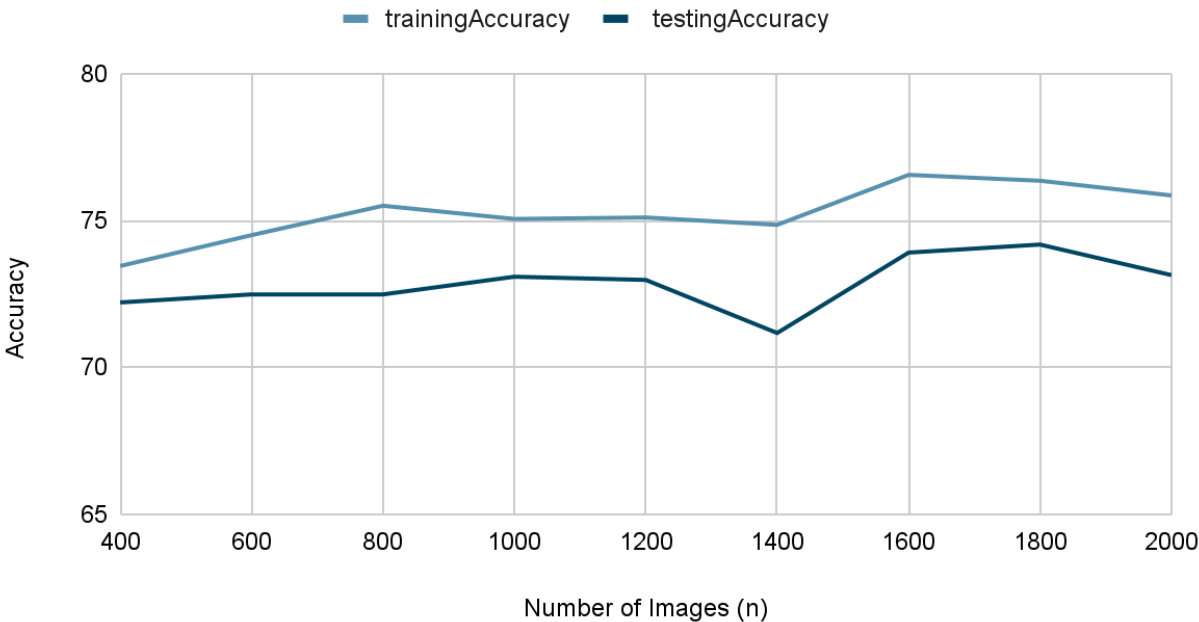
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CS 4342
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Homework 1 - Experimental Results

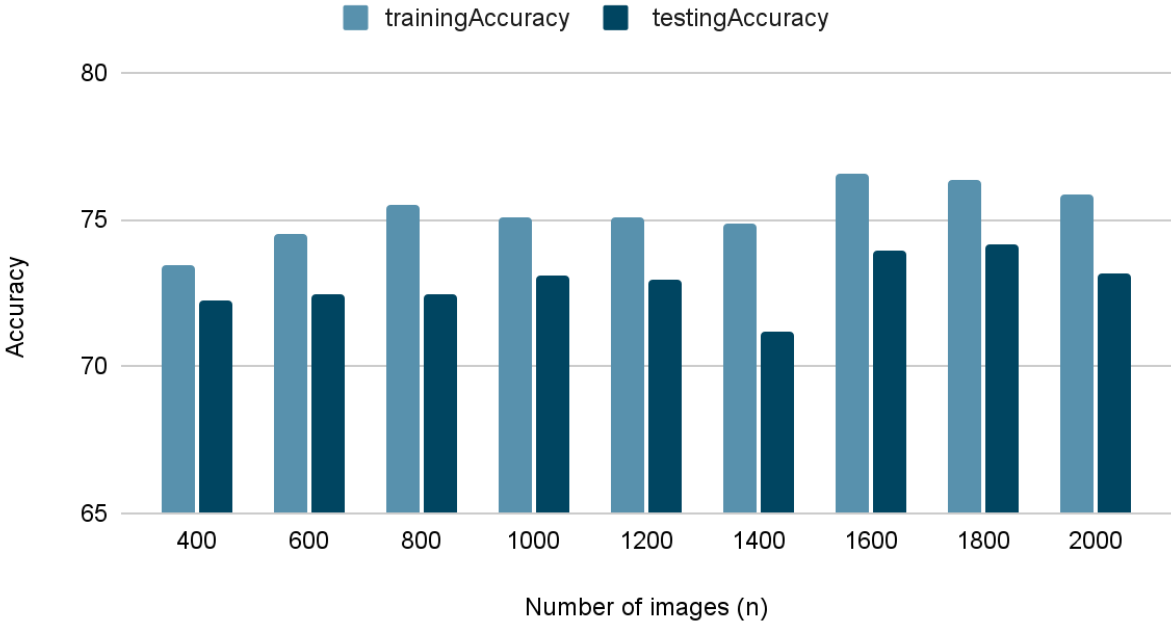
Below are the testing and training accuracies that I got after running my program for each of the sample sizes/number of images n.

n	trainingAccuracy	testingAccuracy
400	73.45	72.21
600	74.5	72.48
800	75.5	72.48
1000	75.05	73.09
1200	75.1	72.98
1400	74.85	71.17
1600	76.55	73.91
1800	76.35	74.18
2000	75.85	73.14

Step-wise Classification Experimental Results



Step-wise Classification Experimental Results



Characterize in words how the training accuracy and testing accuracy changes as a function of n , and how the two curves relate to each other; what trends do you observe?

From looking at the graphs above it seems, although subtle, that the training accuracies and testing accuracies increase linearly with a direct correlation to n , the number of images used. Then as the number of sample images increases, the accuracy levels out/converges. My testing accuracies never get higher or equal to my training accuracies which might be a sign of overfitting. Below is my visualization of the features as shown in boxes superimposed on the face image.

Visualizing the learned features

