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CS 4342
04/01/21

Homework 1

n	trainingAccuracy	testingAccuracy
400	0.7355	0.7112
800	0.7675	0.7407
1200	0.7790	0.7495
1600	0.7755	0.7637
2000	0.7825	0.7642

In general, we can say that both trainingAccuracy and testingAccuracy increase as the number of training samples (n) increases. Both accuracies increase at roughly the same rate, save for the case with n=1600 where the trainingAccuracy is lower than n=1200 but the testingAccuracy still increased.

Script output:

```
Training Model with 400 image samples:
  Predictors selected:
    [(20, 17, 17, 7), (13, 4, 11, 14), (21, 8, 16, 8), (12, 5, 16, 17), (10, 6, 12, 6)]
  Training accuracy on 400 samples of training data = 0.7355
  Testing accuracy on entire test set = 0.7111597374179431

Training Model with 800 image samples:
  Predictors selected:
    [(20, 7, 17, 7), (13, 5, 11, 13), (18, 12, 16, 17), (12, 19, 10, 14), (19, 9, 13, 17)]
  Training accuracy on 800 samples of training data = 0.7675
  Testing accuracy on entire test set = 0.7407002188183808

Training Model with 1200 image samples:
  Predictors selected:
    [(20, 7, 17, 7), (13, 5, 11, 13), (20, 17, 16, 17), (12, 19, 12, 13), (10, 7, 14, 7)]
  Training accuracy on 1200 samples of training data = 0.779
  Testing accuracy on entire test set = 0.74945295404814

Training Model with 1600 image samples:
  Predictors selected:
    [(20, 7, 17, 7), (13, 6, 16, 17), (18, 12, 16, 7), (13, 5, 0, 19), (19, 12, 15, 17)]
  Training accuracy on 1600 samples of training data = 0.7755
  Testing accuracy on entire test set = 0.7636761487964989

Training Model with 2000 image samples:
  Predictors selected:
    [(20, 7, 17, 7), (12, 5, 10, 13), (20, 17, 16, 17), (11, 19, 12, 12), (19, 11, 14, 7)]
  Training accuracy on 2000 samples of training data = 0.7825
  Testing accuracy on entire test set = 0.7642231947483589

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Training completed. Final results:
  Final accuracy of model = 0.7642231947483589
  Final predictors selected:
    [(20, 7, 17, 7), (12, 5, 10, 13), (20, 17, 16, 17), (11, 19, 12, 12), (19, 11, 14, 7)]
```

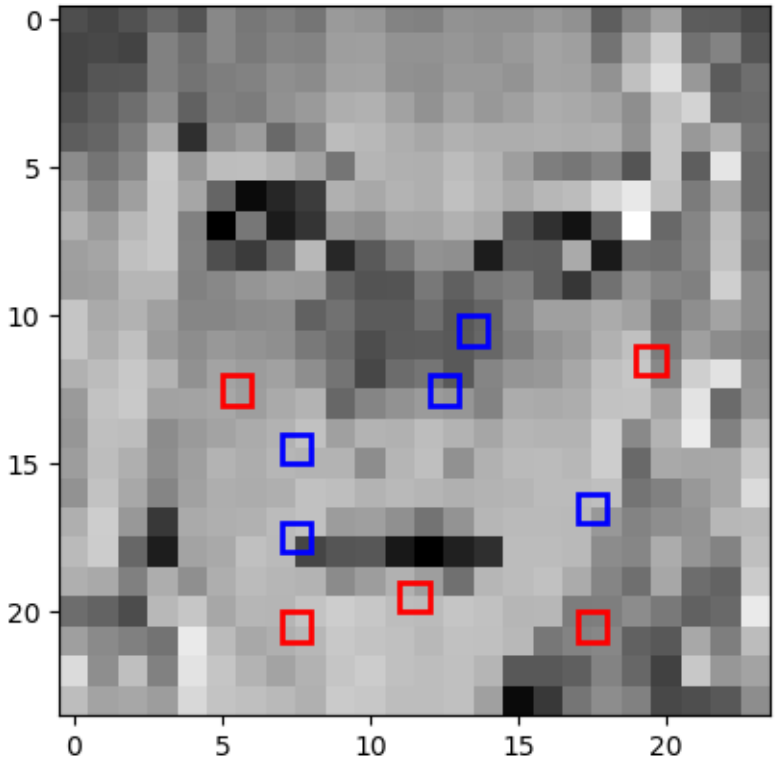
0
5
10
15
20
0
5
10
15
20