

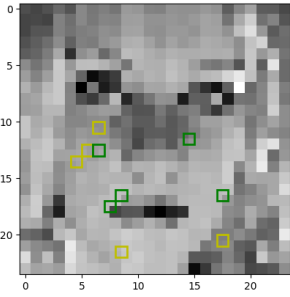
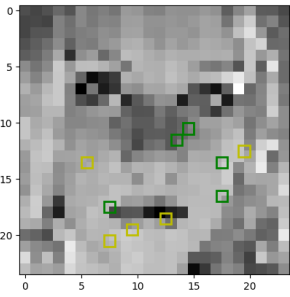
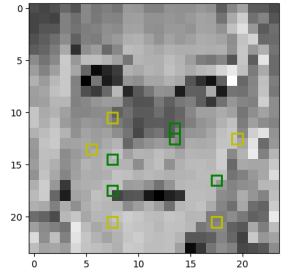
Homework 1  
Machine Learning CS453X  
03/18/2019  
Ying Zhang & Yujia Qiu

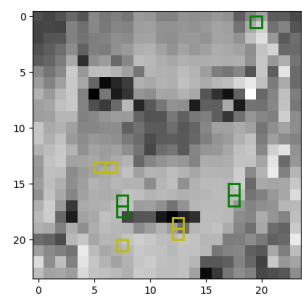
How to run:

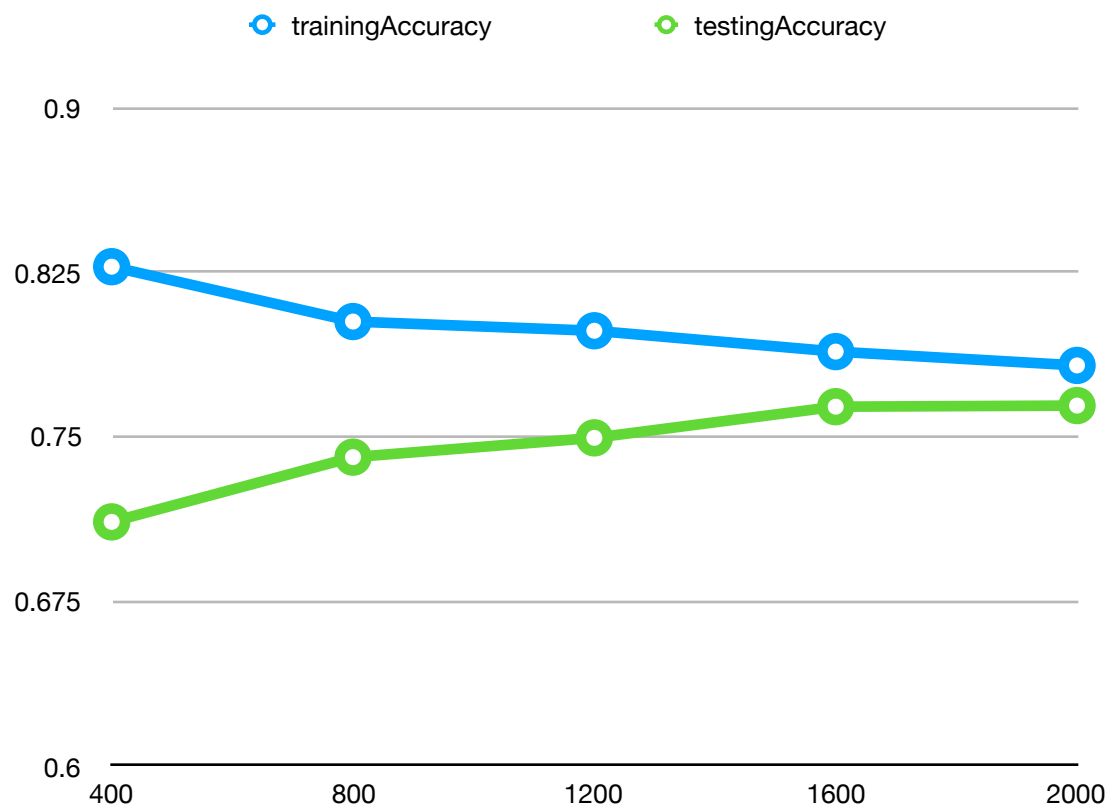
-> python3 homework1\_yzhang23\_yqiu.py

-> python3 homework1\_smile\_yzhang23\_yqiu.py

Result: (took about 3 hours)

N	trainingAccuracy	testingAccuracy	Visualization:
400	0.8275	0.711159737417 9431	
800	0.8025	0.740700218818 3808	
1200	0.798333333333 333	0.7494529540481	

N	trainingAccuracy	testingAccuracy	Visualization:
1600	0.78875	0.7636761487964989	
2000	0.7825	0.7642231947483589	



Overall the testing accuracy is lower than training accuracy, but they are getting closer as the  $N$  increases.