EE239AS Project 3

Yuxin Jin   (104195828)
Jamie Lee   (604589757)
David Hong   (204588953)

March 4, 2016

Problem 1

k	Total Least Squared Error
10	3644.785180
50	69.095613
100	**6.306473**

Problem 2

kFold	1	2	3	4	5	6	7	8	9	10
Average Absolute Error	1.07	1.11	**1.03**	1.08	**1.13**	1.09	1.06	1.11	1.08	1.09

Highest absolute error is 1.13
Lowest absolute error is 1.03

Problem 3

kFold	Area Under the curve
1	5123.32
2	5024.41
3	4994.98
4	5054.01
5	5178.18
6	5057.34
7	5121.12
8	5310.54
9	5000.80
10	5194.35
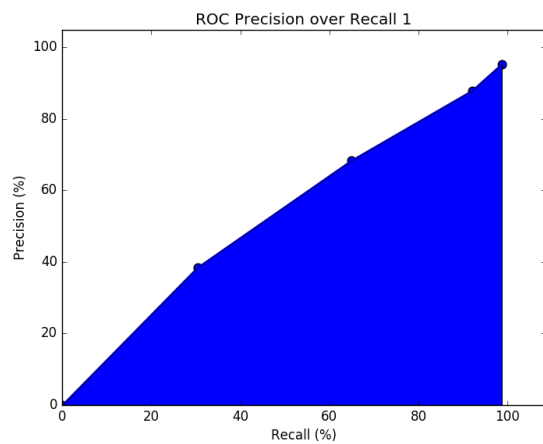
(a)
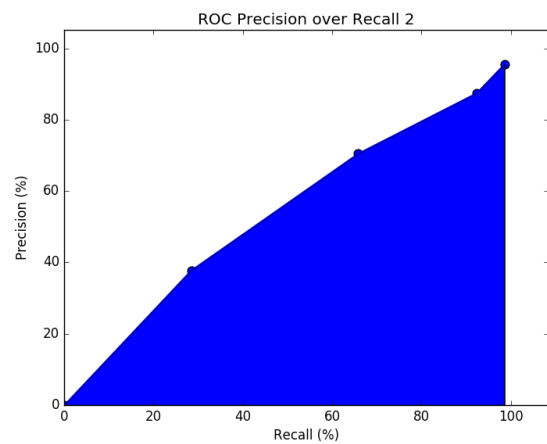
(b)
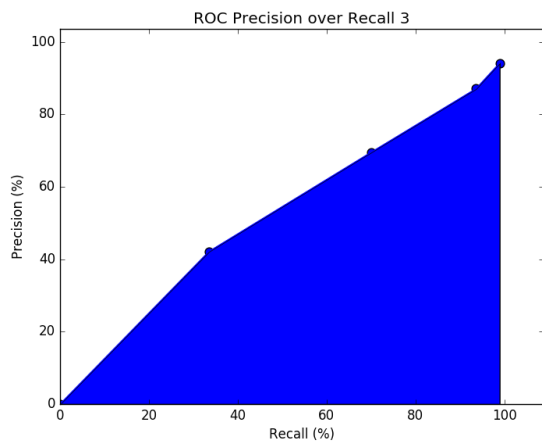
(c)
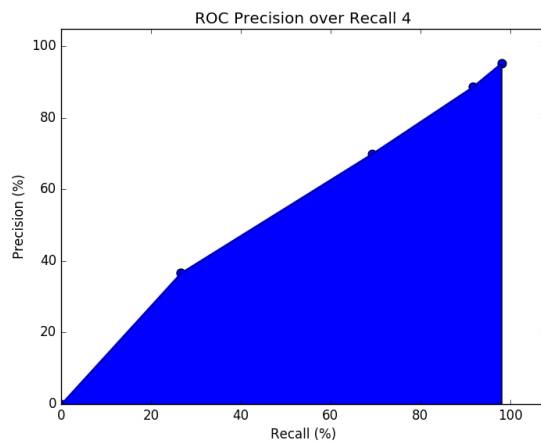
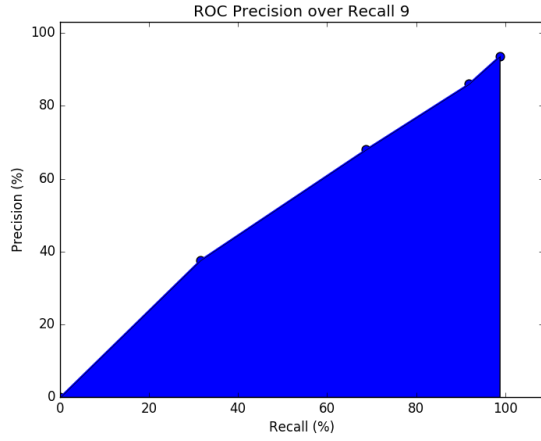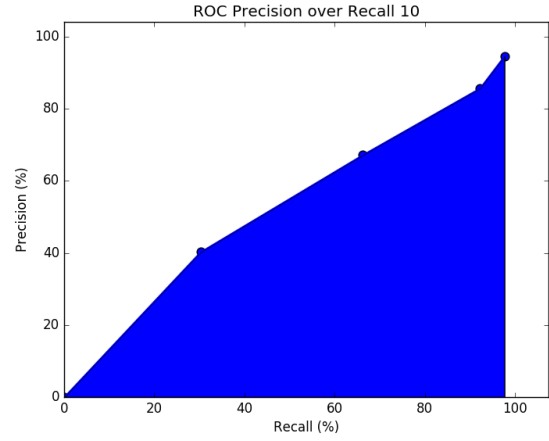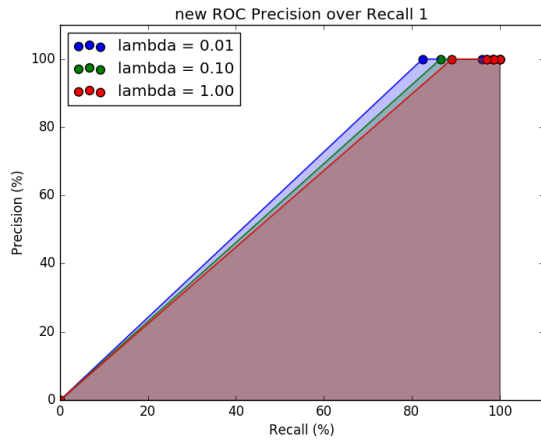
(d)
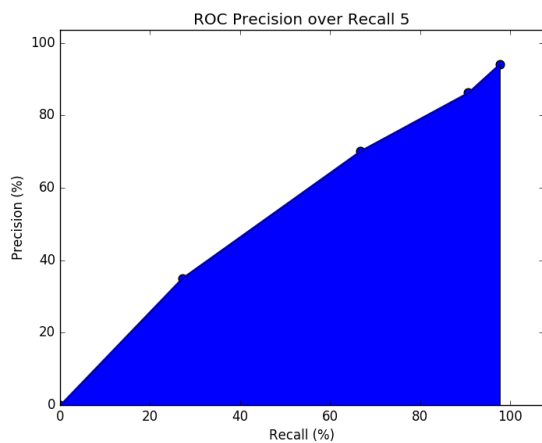
(e)
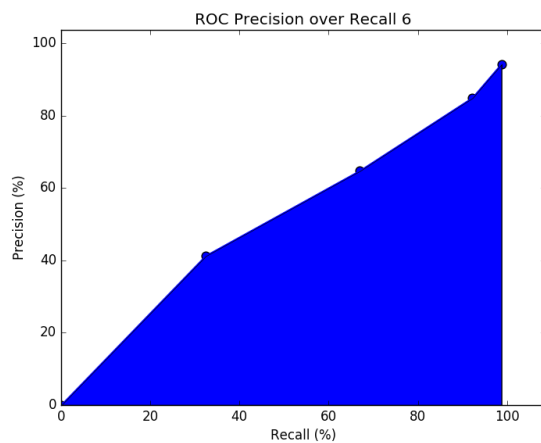
(f)
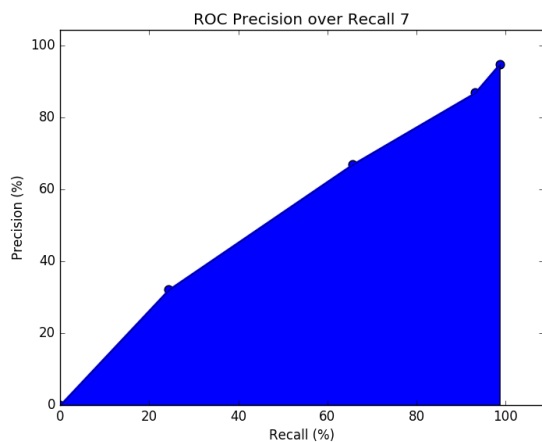
(g)
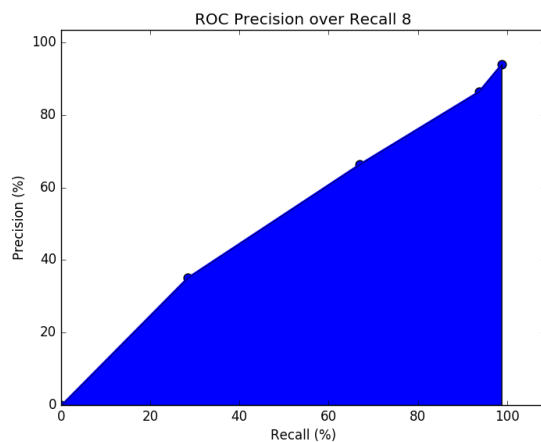
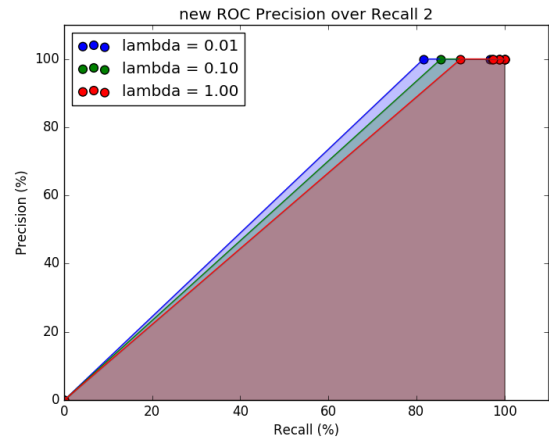(h)

(i)   (j)

Figure 1: ROC graphs of 10 cross validation sets. W have $\{0, 1\}$ entries and R is composed of ratings.

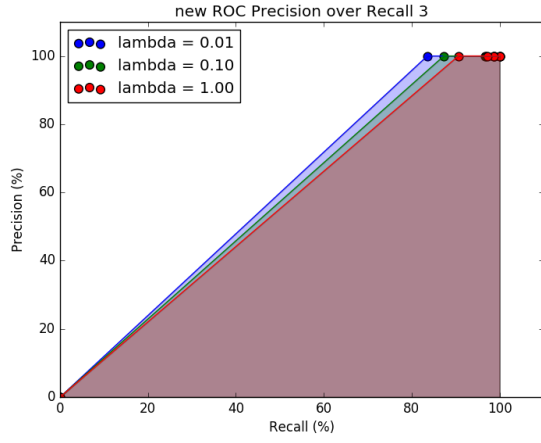# Problem 4

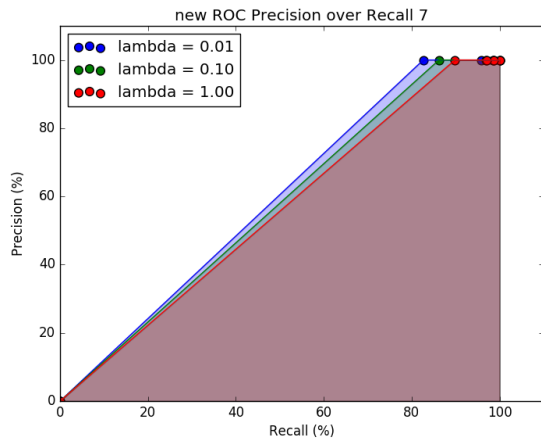| k	Total Least Squared Error
10	1.255808
50	2.844260
100	**0.534604**

(a)   (b)

(c)

(d)

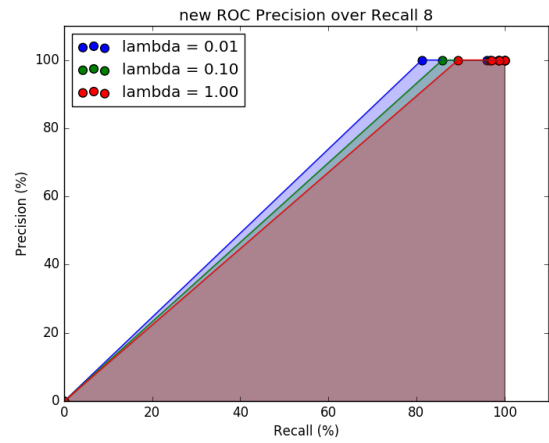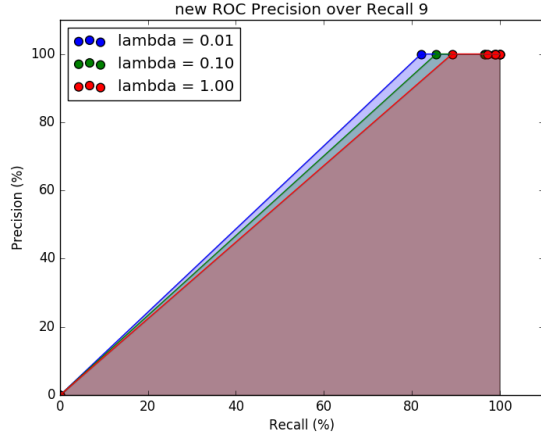
(e)

(f)
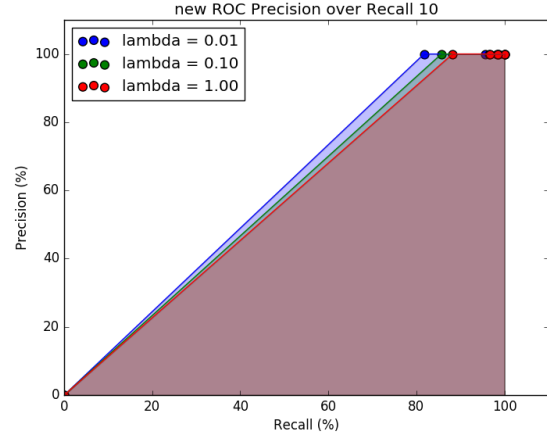

(g)

git

(h)
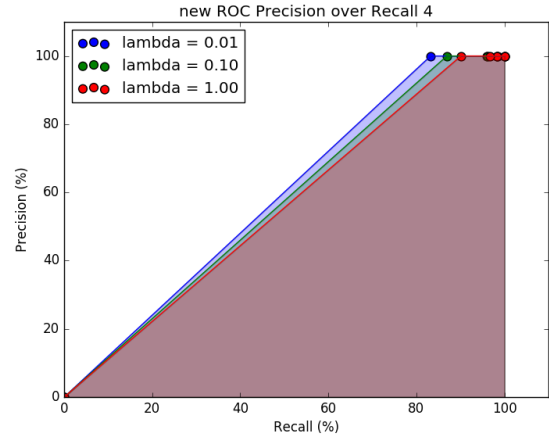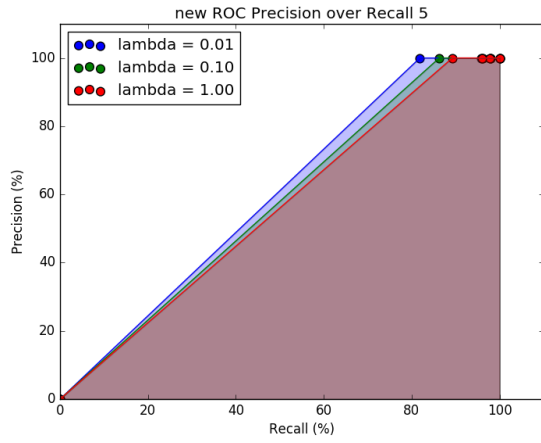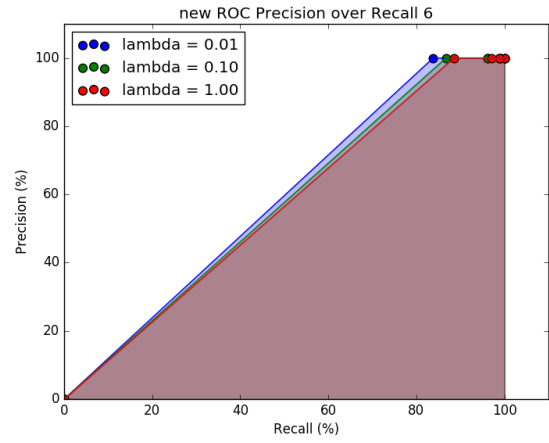
Figure 2: ROC graphs of 10 cross validation sets. R have {0, 1} entries and weights in W are ratings.

Problem 5

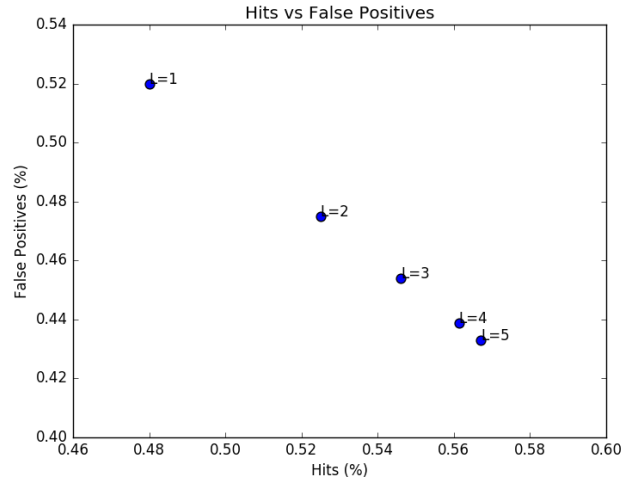The average precision for our collaborative filter system with $L = 5$ is 55.45%.

Figure 3: Hit vs False Positives L = 1-5