ML Offline on Matrix Factorization for Recommender System

Tuning Hyper-parameters:

K	Lambda U	Lambda V	RMSE (60% Train Set)	RMSE (20% Validation Set)
5	0.01	0.01	3.72	4.24
5	0.1	0.1	3.71	4.21
5	1	1	3.75	4.23
5	10	10	3.75	4.24
10	0.01	0.01	3.34	4.56
10	0.1	0.1	3.34	4.44
10	1	1	3.35	4.36
10	10	10	3.34	4.39
20	0.01	0.01	2.70	5.72
20	0.1	0.1	2.70	5.18
20	1	1	2.69	5.10
20	10	10	2.71	5.10
40	0.01	0.01	1.51	8.05
40	0.1	0.1	1.50	7.00
40	1	1	1.50	6.80
40	10	10	1.52	6.67

Best value of hyper-parameters:

K	Lambda U	Lambda V	RMSE (80% Train Set)	RMSE (20% Test Set)
5	0.1	0.1	3.78	4.14