

## EVALUATION RESULTS

(Date: 24 May 2018)

**Dataset 1200 projects**

### TEN-FOLD CROSS VALIDATION

The list is available at:

[https://github.com/CrossRec/CrossRec/blob/master/experimental\\_results/Dataset/projects.txt](https://github.com/CrossRec/CrossRec/blob/master/experimental_results/Dataset/projects.txt)

The id of each project is its corresponding line number in the file.

Round	Training Projects	Testing Projects
1	121 – 1200	001 – 120
2	1 – 120, 241 – 1200	121 – 240
3	1 – 240, 361 – 1200	241 – 360
4	1 – 360, 481 – 1200	361 – 480
5	1 – 480, 601 – 1200	481 – 600
6	1 – 600, 721 – 1200	601 – 720
7	1 – 720, 841 – 1200	721 – 840
8	1 – 840, 961 – 1200	841 – 960
9	1 – 960, 1081 – 1200	961 – 1080
10	1 – 1080	1081 – 1200

### Results for CrossRec

Recall **rate@N** = 5

Fold	Number of neighbours (k)				
	5	10	15	20	25
1	0.93	0.95	0.95	0.94	0.95
2	0.94	0.98	0.97	0.96	0.97
3	0.92	0.93	0.93	0.92	0.93
4	0.88	0.94	0.95	0.93	0.93
5	0.90	0.95	0.97	0.96	0.96
6	0.88	0.90	0.90	0.91	0.92
7	0.92	0.92	0.92	0.93	0.91
8	0.86	0.88	0.87	0.88	0.88
9	0.90	0.93	0.93	0.93	0.94
10	0.90	0.90	0.90	0.90	0.90
Average	0.90	0.93	0.93	0.93	0.93

Recall rate@N = 10

Fold	Number of neighbours (k)				
	5	10	15	20	25
1	0.95	0.98	0.95	0.95	0.96
2	0.98	0.98	0.98	0.98	0.98
3	0.95	0.95	0.94	0.94	0.95
4	0.95	0.99	0.98	0.97	0.98
5	0.95	0.96	0.98	0.98	0.98
6	0.93	0.93	0.91	0.93	0.93
7	0.94	0.96	0.94	0.96	0.94
8	0.90	0.90	0.90	0.90	0.91
9	0.96	0.97	0.98	0.98	0.98
10	0.94	0.94	0.94	0.95	0.94
Average	0.945	0.956	0.950	0.954	0.955

k= 10:

Fold	Number of libraries (N)				
	1	3	5	7	10
1	0.775	0.933	0.950	0.958	0.975
2	0.775	0.933	0.975	0.975	0.983
3	0.825	0.891	0.925	0.942	0.942
4	0.658	0.883	0.942	0.967	0.991
5	0.775	0.916	0.950	0.958	0.958
6	0.667	0.808	0.891	0.908	0.925
7	0.641	0.875	0.916	0.925	0.958
8	0.633	0.825	0.883	0.883	0.908
9	0.675	0.858	0.925	0.958	0.967
10	0.675	0.875	0.900	0.925	0.942
Average	0.697	0.879	0.919	0.939	0.956

**k= 20**

<b>Fold</b>	<b>Number of libraries (N)</b>				
	<b>1</b>	<b>3</b>	<b>5</b>	<b>7</b>	<b>10</b>
1	0.816	0.908	0.941	0.950	0.950
2	0.808	0.925	0.958	0.983	0.983
3	0.825	0.900	0.925	0.925	0.941
4	0.666	0.900	0.933	0.950	0.966
5	0.775	0.925	0.958	0.966	0.975
6	0.691	0.825	0.908	0.916	0.925
7	0.666	0.858	0.925	0.925	0.958
8	0.700	0.833	0.875	0.883	0.908
9	0.716	0.891	0.933	0.958	0.983
10	0.700	0.850	0.891	0.916	0.950
<b>Average</b>	<b>0.736</b>	<b>0.881</b>	<b>0.924</b>	<b>0.937</b>	<b>0.953</b>

**Results for LibRec**

**Recall [rate@N](#) = 5**

<b>Fold</b>	<b>Number of neighbours (k)</b>				
	<b>5</b>	<b>10</b>	<b>15</b>	<b>20</b>	<b>25</b>
1	0.892	0.925	0.933	0.93	0.93
2	0.958	0.958	0.95	0.94	0.94
3	0.9	0.875	0.875	0.86	0.88
4	0.9	0.842	0.841	0.84	0.84
5	0.875	0.891	0.90	0.88	0.90
6	0.875	0.783	0.81	0.79	0.81
7	0.825	0.85	0.85	0.86	0.85
8	0.85	0.858	0.86	0.86	0.85
9	0.9	0.908	0.89	0.9	0.90
10	0.792	0.8	0.78	0.775	0.78
<b>Average</b>					

Recall rate@N = 10

Fold	Number of neighbours (k)				
	5	10	15	20	25
1	0.90	0.925	0.93	0.93	0.93
2	0.96	0.94	0.94	0.94	0.95
3	0.90	0.88	0.88	0.86	0.87
4	0.86	0.85	0.83	0.85	0.84
5	0.86	0.87	0.90	0.90	0.89
6	0.775	0.81	0.80	0.80	0.80
7	0.833	0.85	0.85	0.85	0.84
8	0.875	0.85	0.86	0.85	0.84
9	0.9	0.89	0.89	0.90	0.90
10	0.783	0.78	0.79	0.77	0.77
<b>Average</b>	<b>0.864</b>	<b>0.864</b>	<b>0.867</b>	<b>0.865</b>	<b>0.863</b>

k= 10:

Fold	Number of libraries (N)				
	1	3	5	7	10
1	0.608	0.858	0.925	0.925	0.94
2	0.725	0.91	0.94	0.96	0.99
3	0.716	0.858	0.883	0.90	0.925
4	0.64	0.808	0.85	0.89	0.9
5	0.675	0.825	0.866	0.925	0.94
6	0.57	0.74	0.81	0.84	0.86
7	0.616	0.783	0.85	0.88	0.91
8	0.658	0.8	0.858	0.883	0.908
9	0.68	0.816	0.891	0.958	0.975
10	0.591	0.74	0.78	0.85	0.9083
<b>Average</b>					

k= 20

Fold	Number of libraries (N)				
	1	3	5	7	10
1	0.68	0.84	0.93	0.941	0.95
2	0.775	0.933	0.941	0.96	0.98
3	0.75	0.85	0.86	0.89	0.925
4	0.65	0.808	0.858	0.88	0.90
5	0.675	0.875	0.908	0.925	0.933
6	0.591	0.758	0.80	0.833	0.875
7	0.616	0.766	0.858	0.875	0.925
8	0.658	0.791	0.85	0.883	0.89
9	0.716	0.85	0.9083	0.93	0.958
10	0.625	0.725	0.775	0.85	0.916
Average					