

Precision-recall average exercise

Query 1

R1 = { D3, D5, D9, D25, D39, D44, D56, D71, D89, D123 }

Order	Precision	Recall
* D123	1/1	1/10
- D84	1/2	1/10
* D56	2/3	2/10
- D6	2/4	2/10
- D8	2/5	2/10
* D9	3/6	3/10
- D511	3/7	3/10
- D129	3/8	3/10
- D187	3/9	3/10
* D25	4/10	4/10
- D38	4/11	4/10
- D48	4/12	4/10
- D250	4/13	4/10
- D113	4/14	4/10
* D3	5/15	5/10

Query 2

R2 = { D3, D5, D9, D25, D39, D44, D56, D71, D89, D123 }

Order	Precision	Recall
* D123	1/1	1/10
- D84	1/2	1/10
* D39	2/3	2/10
* D9	3/4	3/10
- D8	3/5	3/10
* D71	4/6	4/10

Order	Precision	Recall
* D44	5/7	5/10
- D129	5/8	5/10
- D187	5/9	5/10
* D25	6/10	6/10
- D38	6/11	6/10
- D48	6/12	6/10
- D250	6/13	6/10
- D113	6/14	6/10
* D3	7/15	7/10

Precision and recalls summarize

Precision Q1	Recall Q1	Precision Q2	Recall Q2
1/1=1	1/10=0.1	1/1=1	1/10=0.1
1/2=0.5	1/10=0.1	1/2=0.5	1/10=0.1
2/3=0.666667	2/10=0.2	2/3=0.666667	2/10=0.2
2/4=0.5	2/10=0.2	3/4=0.75	3/10=0.3
2/5=0.4	2/10=0.2	3/5=0.6	3/10=0.3
3/6=0.5	3/10=0.3	4/6=0.666667	4/10=0.4
3/7=0.428571	3/10=0.3	5/7=0.714286	5/10=0.5
3/8=0.375	3/10=0.3	5/8=0.625	5/10=0.5
3/9=0.333333	3/10=0.3	5/9=0.555556	5/10=0.5
4/10=0.4	4/10=0.4	6/10=0.6	6/10=0.6
4/11=0.363636	4/10=0.4	6/11=0.545455	6/10=0.6
4/12=0.333333	4/10=0.4	6/12=0.5	6/10=0.6
4/13=0.307692	4/10=0.4	6/13=0.461538	6/10=0.6
4/14=0.285714	4/10=0.4	6/14=0.428571	6/10=0.6
5/15=0.333333	5/10=0.5	7/15=0.466667	7/10=0.7

Precision and recall averages

Average Precision	Average Recall
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Average Precision	Average Recall
$1/1=1$	$1/10=0.1$
$1/2=0.5$	$1/10=0.1$
$2/3=0.666667$	$1/5=0.2$
$5/8=0.625$	$1/4=0.25$
$1/2=0.5$	$1/4=0.25$
$7/12=0.583333$	$7/20=0.35$
$4/7=0.571429$	$2/5=0.4$
$1/2=0.5$	$2/5=0.4$
$4/9=0.444444$	$2/5=0.4$
$1/2=0.5$	$1/2=0.5$
$5/11=0.454545$	$1/2=0.5$
$5/12=0.416667$	$1/2=0.5$
$5/13=0.384615$	$1/2=0.5$
$5/14=0.357143$	$1/2=0.5$
$2/5=0.4$	$3/5=0.6$

Averages' graph:

