

training size = 10,234															
	rails	joomla	angular	ceph	ansible	facebook	elastic	docker	cocos2d	django	hashicorp	emberjs	JuliaLang	dotnet	average
preciou@1	84.21%	57.89%	100.00%	84.21%	55.26%	47.37%	36.84%	45.95%	52.63%	43.24%	35.14%	36.84%	28.21%	34.21%	53.00%
preciou@2	70.13%	40.26%	100.00%	62.34%	49.35%	36.36%	28.57%	33.33%	40.79%	33.33%	24.00%	27.63%	17.95%	28.57%	42.33%
preciou@3	60.34%	33.91%	100.00%	57.76%	37.93%	31.90%	20.00%	26.55%	32.46%	30.36%	22.32%	23.68%	16.10%	20.69%	36.71%
preciou@4	52.90%	27.92%	93.02%	50.97%	33.55%	26.45%	18.83%	24.50%	26.32%	24.67%	20.67%	19.61%	13.38%	15.48%	32.02%
preciou@5	47.94%	25.39%	83.33%	43.81%	29.38%	22.68%	17.10%	21.16%	22.11%	20.32%	17.65%	16.75%	13.20%	12.44%	28.09%
recall@1	16.08%	14.47%	8.93%	30.77%	20.39%	24.32%	22.58%	27.87%	35.09%	29.09%	25.00%	30.43%	26.19%	43.33%	25.33%
recall@2	27.14%	20.39%	18.75%	46.15%	36.89%	37.84%	35.48%	40.98%	54.39%	45.45%	34.62%	45.65%	33.33%	73.33%	39.31%
recall@3	35.18%	25.66%	28.57%	64.42%	42.72%	50.00%	37.10%	49.18%	64.91%	61.82%	48.08%	58.70%	45.24%	80.00%	49.40%
recall@4	41.21%	28.29%	35.71%	75.96%	50.49%	55.41%	46.77%	60.66%	70.18%	67.27%	59.62%	65.22%	50.00%	80.00%	56.20%
recall@5	46.73%	32.24%	40.18%	81.73%	55.34%	59.46%	53.23%	65.57%	73.68%	69.09%	63.46%	69.57%	61.90%	80.00%	60.87%
f1-score@1	27.00%	23.16%	16.39%	45.07%	29.79%	32.14%	28.00%	34.69%	42.11%	34.78%	29.21%	33.33%	27.16%	38.24%	34.27%
f1-score@2	39.13%	27.07%	31.58%	53.04%	42.22%	37.09%	31.65%	36.76%	46.62%	38.46%	28.35%	34.43%	23.33%	41.12%	40.77%
f1-score@3	44.44%	29.21%	44.44%	60.91%	40.18%	38.95%	25.99%	34.48%	43.27%	40.72%	30.49%	33.75%	23.75%	32.88%	42.12%
f1-score@4	46.33%	28.10%	51.61%	61.00%	40.31%	35.81%	26.85%	34.91%	38.28%	36.10%	30.69%	30.15%	21.11%	25.95%	40.80%
f1-score@5	47.33%	28.41%	54.22%	57.05%	38.38%	32.84%	25.88%	32.00%	34.01%	31.41%	27.62%	27.00%	21.76%	21.52%	38.44%
MRR	100.00%	50.00%	100.00%	100.00%	50.00%	100.00%	100.00%	50.00%	100.00%	100.00%	33.33%	100.00%	50.00%	50.00%	77.38%
MAP@1	75.81%	41.24%	100.00%	79.16%	34.99%	27.09%	25.10%	31.45%	38.37%	26.27%	12.76%	18.04%	16.06%	11.77%	38.44%
MAP@2	58.76%	26.93%	100.00%	54.24%	28.83%	19.56%	15.85%	20.01%	26.16%	17.04%	8.32%	11.97%	9.08%	9.99%	29.05%
MAP@3	47.93%	20.58%	100.00%	45.96%	21.33%	15.67%	10.81%	14.61%	19.42%	13.95%	7.18%	9.27%	6.78%	7.04%	24.32%
MAP@4	40.43%	16.15%	91.85%	38.63%	17.82%	12.49%	8.84%	12.10%	15.10%	10.97%	6.26%	7.35%	5.27%	5.27%	20.61%
MAP@5	35.18%	13.75%	81.36%	32.33%	15.00%	10.35%	7.44%	10.03%	12.36%	8.93%	5.22%	6.09%	4.53%	4.23%	17.63%

training size = 20,469															
	rails	joomla	angular	ceph	ansible	facebook	elastic	docker	cocos2d	django	hashicorp	emberjs	JuliaLang	dotnet	average
preciou@1	81.58%	52.63%	100.00%	81.58%	60.53%	55.26%	42.11%	45.95%	44.74%	43.24%	40.54%	36.84%	28.21%	34.21%	53.39%
preciou@2	68.83%	40.26%	90.48%	62.34%	38.96%	37.66%	31.17%	36.00%	36.84%	37.33%	26.67%	23.68%	17.95%	23.38%	40.82%
preciou@3	57.76%	29.57%	87.50%	50.86%	31.90%	25.86%	23.48%	31.86%	29.82%	29.46%	21.43%	17.54%	15.25%	16.38%	33.48%
preciou@4	51.61%	24.68%	88.37%	43.87%	27.74%	23.87%	18.83%	26.49%	25.00%	24.00%	18.00%	14.38%	13.38%	12.90%	29.51%
preciou@5	43.30%	20.73%	81.48%	37.63%	24.23%	19.07%	15.54%	22.75%	21.05%	19.79%	14.97%	12.57%	11.68%	11.92%	25.48%
recall@1	15.58%	13.16%	8.93%	29.81%	22.33%	28.38%	25.81%	27.87%	29.82%	29.09%	28.85%	30.43%	26.19%	43.33%	25.68%
recall@2	26.63%	20.39%	16.96%	46.15%	29.13%	39.19%	38.71%	44.26%	49.12%	50.91%	38.46%	39.13%	33.33%	60.00%	38.03%
recall@3	33.67%	22.37%	25.00%	56.73%	35.92%	40.54%	43.55%	59.02%	59.65%	60.00%	46.15%	43.48%	42.86%	63.33%	45.16%
recall@4	40.20%	25.00%	33.93%	65.38%	41.75%	50.00%	46.77%	65.57%	66.67%	65.45%	51.92%	47.83%	50.00%	66.67%	51.22%
recall@5	42.21%	26.32%	39.29%	70.19%	45.63%	50.00%	48.39%	70.49%	70.18%	67.27%	53.85%	52.17%	54.76%	76.67%	54.82%
f1-score@1	26.16%	21.05%	16.39%	43.66%	32.62%	37.50%	32.00%	34.69%	35.79%	34.78%	33.71%	33.33%	27.16%	38.24%	34.68%
f1-score@2	38.41%	27.07%	28.57%	53.04%	33.33%	38.41%	34.53%	39.71%	42.11%	43.08%	31.50%	29.51%	23.33%	33.64%	39.38%
f1-score@3	42.54%	25.47%	38.89%	53.64%	33.79%	31.58%	30.51%	41.38%	39.77%	39.52%	29.27%	25.00%	22.50%	26.03%	38.45%
f1-score@4	45.20%	24.84%	49.03%	52.51%	33.33%	32.31%	26.85%	37.74%	36.36%	35.12%	26.73%	22.11%	21.11%	21.62%	37.45%
f1-score@5	42.75%	23.19%	53.01%	48.99%	31.65%	27.61%	23.53%	34.40%	32.39%	30.58%	23.43%	20.25%	19.25%	20.63%	34.79%
MRR	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	50.00%	100.00%	100.00%	100.00%	100.00%	50.00%	100.00%	92.86%
MAP@1	78.68%	41.43%	100.00%	67.12%	51.76%	41.89%	32.49%	24.27%	25.58%	31.59%	23.30%	21.84%	12.21%	21.28%	40.96%
MAP@2	60.76%	27.71%	89.72%	49.04%	29.91%	25.50%	19.64%	17.88%	19.21%	22.49%	13.79%	12.53%	6.90%	12.43%	29.11%
MAP@3	47.91%	19.55%	83.80%	37.93%	22.00%	17.22%	13.79%	14.60%	14.45%	16.58%	10.11%	8.76%	5.15%	8.43%	22.88%
MAP@4	40.54%	15.30%	82.64%	31.14%	17.59%	14.01%	10.57%	11.73%	11.56%	12.95%	7.93%	6.75%	4.17%	6.41%	19.52%
MAP@5	33.37%	12.43%	75.31%	25.93%	14.60%	11.19%	8.53%	9.76%	9.48%	10.50%	6.46%	5.54%	3.46%	5.34%	16.56%

training size = 30,704															
	rails	joomla	angular	ceph	ansible	facebook	elastic	docker	cocos2d	django	hashicorp	emberjs	JuliaLang	dotnet	average
preciou@1	100.00%	97.37%	90.00%	97.37%	100.00%	92.11%	86.84%	86.49%	84.21%	91.89%	91.89%	78.95%	53.85%	55.26%	86.16%
preciou@2	100.00%	97.40%	95.24%	89.61%	87.01%	68.83%	49.35%	62.67%	57.89%	66.67%	61.33%	48.68%	37.18%	32.47%	68.17%
preciou@3	99.14%	85.22%	87.50%	75.86%	72.41%	50.86%	35.65%	46.90%	40.35%	46.43%	41.96%	33.33%	26.27%	21.55%	54.53%
preciou@4	92.26%	69.48%	86.05%	58.71%	54.19%	38.71%	27.27%	35.10%	30.92%	34.67%	31.33%	24.84%	19.75%	16.77%	44.29%
preciou@5	87.63%	56.48%	83.33%	48.45%	44.85%	31.44%	22.28%	28.04%	25.79%	27.81%	25.13%	20.42%	15.74%	13.47%	37.92%
recall@1	19.10%	24.34%	8.04%	35.58%	36.89%	47.30%	53.23%	52.46%	56.14%	61.82%	65.38%	65.22%	50.00%	70.00%	46.11%
recall@2	38.69%	49.34%	17.86%	66.35%	65.05%	71.62%	61.29%	77.05%	77.19%	90.91%	88.46%	80.43%	69.05%	83.33%	66.90%
recall@3	57.79%	64.47%	25.00%	84.62%	81.55%	79.73%	66.13%	86.89%	80.70%	94.55%	90.38%	82.61%	73.81%	83.33%	75.11%
recall@4	71.86%	70.39%	33.04%	87.50%	81.55%	81.08%	67.74%	86.89%	82.46%	94.55%	90.38%	82.61%	73.81%	86.67%	77.89%
recall@5	85.43%	71.71%	40.18%	90.38%	84.47%	82.43%	69.35%	86.89%	85.96%	94.55%	90.38%	84.78%	73.81%	86.67%	80.50%
f1-score@1	32.07%	38.95%	14.75%	52.11%	53.90%	62.50%	66.00%	65.31%	67.37%	73.91%	76.40%	71.43%	51.85%	61.76%	60.07%
f1-score@2	55.80%	65.50%	30.08%	76.24%	74.44%	70.20%	54.68%	69.12%	66.17%	76.92%	72.44%	60.66%	48.33%	46.73%	67.53%
f1-score@3	73.02%	73.41%	38.89%	80.00%	76.71%	62.11%	46.33%	60.92%	53.80%	62.28%	57.32%	47.50%	38.75%	34.25%	63.19%
f1-score@4	80.79%	69.93%	47.74%	70.27%	65.12%	52.40%	38.89%	50.00%	44.98%	50.73%	46.53%	38.19%	31.16%	28.11%	56.47%
f1-score@5	86.51%	63.19%	54.22%	63.09%	58.59%	45.52%	33.73%	42.40%	39.68%	42.98%	39.33%	32.91%	25.94%	23.32%	51.55%
MRR	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%
MAP@1	100.00%	96.58%	85.21%	95.58%	100.00%	87.75%	84.54%	81.88%	81.31%	89.98%	91.03%	75.20%	43.77%	43.40%	82.59%
MAP@2	100.00%	96.05%	89.55%	87.17%	85.17%	63.45%	45.76%	56.70%	53.20%	63.20%	57.29%	43.80%	27.11%	23.87%	63.74%
MAP@3	99.14%	83.15%	81.87%	72.11%	68.82%	45.47%	31.69%	40.66%	36.30%	43.23%	38.84%	29.55%	18.40%	15.85%	50.36%
MAP@4	91.50%	66.59%	78.74%	55.20%	51.51%	34.28%	23.85%	30.43%	27.46%	32.28%	29.00%	22.02%	13.83%	11.99%	40.62%
MAP@5	85.86%	53.79%	74.87%	44.96%	41.89%	27.58%	19.17%	24.31%	22.27%	25.89%	23.26%	17.75%	11.02%	9.63%	34.45%

training size = 40,939															
	rails	joomla	angular	ceph	ansible	facebook	elastic	docker	cocos2d	django	hashicorp	emberjs	JuliaLang	dotnet	average
preciou@1	97.37%	100.00%	100.00%	100.00%	100.00%	97.37%	86.84%	100.00%	94.74%	94.59%	100.00%	86.84%	66.67%	55.26%	91.41%
preciou@2	98.70%	96.10%	100.00%	98.70%	94.81%	76.62%	49.35%	72.00%	60.53%	68.00%	64.00%	52.63%	39.74%	29.87%	71.50%
preciou@3	98.28%	90.43%	100.00%	78.45%	73.28%	53.45%	33.91%	49.56%	42.98%	47.32%	42.86%	35.09%	27.97%	22.41%	56.86%
preciou@4	96.13%	75.97%	100.00%	58.71%	58.06%	41.94%	25.32%	37.09%	33.55%	35.33%	32.00%	27.45%	21.02%	16.77%	47.10%
preciou@5	88.66%	61.66%	100.00%	48.45%	47.42%	33.51%	22.28%	30.16%	26.84%	28.34%	25.67%	22.51%	16.75%	13.99%	40.45%
recall@1	18.59%	25.00%	8.93%	36.54%	36.89%	50.00%	53.23%	60.66%	63.16%	63.64%	71.15%	71.74%	61.90%	70.00%	49.39%
recall@2	38.19%	48.68%	18.75%	73.08%	70.87%	79.73%	61.29%	88.52%	80.70%	92.73%	92.31%	86.96%	73.81%	76.67%	70.16%
recall@3	57.29%	68.42%	28.57%	87.50%	82.52%	83.78%	62.90%	91.80%	85.96%	96.36%	92.31%	86.96%	78.57%	86.67%	77.83%
recall@4	74.87%	76.97%	38.39%	87.50%	87.38%	87.84%	62.90%	91.80%	89.47%	96.36%	92.31%	91.30%	78.57%	86.67%	81.60%
recall@5	86.43%	78.29%	48.21%	90.38%	89.32%	87.84%	69.35%	93.44%	89.47%	96.36%	92.31%	93.48%	78.57%	90.00%	84.53%
f1-score@1	31.22%	40.00%	16.39%	53.52%	53.90%	66.07%	66.00%	75.51%	75.79%	76.09%	83.15%	78.57%	64.20%	61.76%	64.13%
f1-score@2	55.07%	64.63%	31.58%	83.98%	81.11%	78.15%	54.68%	79.41%	69.17%	78.46%	75.59%	65.57%	51.67%	42.99%	70.83%
f1-score@3	72.38%	77.90%	44.44%	82.73%	77.63%	65.26%	44.07%	64.37%	57.31%	63.47%	58.54%	50.00%	41.25%	35.62%	65.71%
f1-score@4	84.18%	76.47%	55.48%	70.27%	69.77%	56.77%	36.11%	52.83%	48.80%	51.71%	47.52%	42.21%	33.17%	28.11%	59.72%
f1-score@5	87.53%	68.99%	65.06%	63.09%	61.95%	48.51%	33.73%	45.60%	41.30%	43.80%	40.17%	36.29%	27.62%	24.22%	54.71%
MRR	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%
MAP@1	95.71%	100.00%	100.00%	100.00%	100.00%	97.15%	86.15%	100.00%	93.91%	94.22%	100.00%	79.44%	61.34%	52.24%	90.01%
MAP@2	96.97%	94.82%	100.00%	98.46%	94.02%	73.81%	46.47%	70.83%	57.07%	66.29%	62.66%	46.93%	33.70%	26.92%	69.21%
MAP@3	96.68%	87.98%	100.00%	77.84%	71.42%	50.81%	31.41%	48.01%	39.40%	45.35%	41.96%	31.29%	22.90%	18.51%	54.54%
MAP@4	94.38%	72.98%	100.00%	58.25%	55.51%	38.93%	23.46%	35.93%	30.09%	33.86%	31.33%	23.69%	17.21%	13.85%	44.96%
MAP@5	86.57%	58.91%	100.00%	47.33%	44.90%	31.10%	19.22%	28.88%	24.07%	27.16%	25.13%	19.11%	13.71%	11.21%	38.38%

training size = 51,174															
	rails	joomla	angular	ceph	ansible	facebook	elastic	docker	cocos2d	django	hashicorp	emberjs	JuliaLang	dotnet	average
preciou@1	100.00%	97.37%	100.00%	100.00%	100.00%	97.37%	84.21%	100.00%	97.37%	97.30%	100.00%	86.84%	69.23%	60.53%	92.16%
preciou@2	100.00%	97.40%	100.00%	98.70%	92.21%	79.22%	50.65%	73.33%	64.47%	65.33%	62.67%	53.95%	41.03%	33.77%	72.34%
preciou@3	98.28%	90.43%	100.00%	79.31%	70.69%	54.31%	37.39%	48.67%	46.49%	44.64%	41.96%	36.84%	27.97%	23.28%	57.16%
preciou@4	94.84%	74.03%	100.00%	61.29%	54.84%	41.29%	29.22%	36.42%	35.53%	33.33%	32.00%	27.45%	22.29%	17.42%	47.14%
preciou@5	89.18%	62.18%	100.00%	50.00%	45.36%	34.02%	23.32%	29.63%	28.42%	26.74%	26.74%	21.99%	18.27%	14.51%	40.74%
recall@1	19.10%	24.34%	8.93%	36.54%	36.89%	50.00%	51.61%	60.66%	64.91%	65.45%	71.15%	71.74%	64.29%	76.67%	50.16%
recall@2	38.69%	49.34%	18.75%	73.08%	68.93%	82.43%	62.90%	90.16%	85.96%	89.09%	90.38%	89.13%	76.19%	86.67%	71.55%
recall@3	57.29%	68.42%	28.57%	88.46%	79.61%	85.14%	69.35%	90.16%	92.98%	90.91%	90.38%	91.30%	78.57%	90.00%	78.65%
recall@4	73.87%	75.00%	38.39%	91.35%	82.52%	86.49%	72.58%	90.16%	94.74%	90.91%	92.31%	91.30%	83.33%	90.00%	82.35%
recall@5	86.93%	78.95%	48.21%	93.27%	85.44%	89.19%	72.58%	91.80%	94.74%	90.91%	96.15%	91.30%	85.71%	93.33%	85.61%
f1-score@1	32.07%	38.94%	16.40%	53.52%	53.90%	66.07%	64.00%	75.51%	77.89%	78.26%	83.14%	78.57%	66.67%	67.65%	64.96%
f1-score@2	55.79%	65.50%	31.58%	83.98%	78.89%	80.79%	56.11%	80.88%	73.68%	75.38%	74.02%	67.22%	53.34%	48.60%	71.94%
f1-score@3	72.38%	77.90%	44.44%	83.64%	74.89%	66.32%	48.59%	63.22%	61.99%	59.88%	57.31%	52.50%	41.25%	36.99%	66.20%
f1-score@4	83.05%	74.51%	55.48%	73.36%	65.89%	55.90%	41.67%	51.88%	51.68%	48.78%	47.53%	42.21%	35.17%	29.19%	59.96%
f1-score@5	88.04%	69.57%	65.06%	65.10%	59.26%	49.25%	35.30%	44.80%	43.72%	41.32%	41.84%	35.44%	30.12%	25.12%	55.21%
MRR	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%
MAP@1	100.00%	96.48%	100.00%	100.00%	100.00%	95.96%	82.71%	100.00%	97.23%	95.08%	100.00%	85.46%	58.20%	55.38%	90.46%
MAP@2	100.00%	95.65%	100.00%	98.29%	91.73%	76.55%	47.44%	72.10%	61.67%	63.19%	61.68%	50.95%	32.35%	29.23%	70.06%
MAP@3	97.72%	88.06%	100.00%	78.07%	68.13%	51.89%	33.28%	47.85%	43.17%	42.87%	41.30%	34.43%	21.70%	19.68%	54.87%
MAP@4	93.84%	71.41%	100.00%	59.73%	52.20%	39.13%	25.26%	35.81%	32.66%	32.01%	31.07%	25.65%	16.66%	14.73%	45.01%
MAP@5	87.43%	59.08%	100.00%	48.36%	42.46%	31.64%	20.16%	28.78%	26.13%	25.68%	25.24%	20.55%	13.38%	11.92%	38.63%