Table 1: Results of the parameter sensitivity analysis of the parameters that may influence *the MIC score*. The baseline parameters and their values are shown in the table. For each system, we show the MIC score when the parameter changes. The values in the parentheses indicate the increase/decrease from the baseline MIC score.

Baseline Values: K=500, II=10,000, W cut-off=0.05			
Lower		*Higher*	
New Value	MIC	New Value	MIC
Mylyn 1.0 (Baseline MIC = 0.54)			
K=300	0.32 (-0.22)	K=600	0.40 (-0.14)
K=400	0.38 (-0.16)	K=700	0.76 (+0.22)
II=8K	0.49 (-0.05)	II=11K	0.53 (-0.01)
II=9K	0.57 (+0.03)	II=12K	0.47 (-0.07)
W cut-off=0.025	0.46 (-0.08)	W cut-off=0.1	0.63 (+0.09)
Mylyn 2.0 (Baseline MIC = 0.56)			
K=300	0.38 (-0.18)	K=600	0.40 (-0.16)
K=400	0.46 (-0.10)	K=700	0.68 (+0.12)
II=8K	0.49 (-0.07)	II=11K	0.53 (-0.03)
II=9K	0.62 (+0.06)	II=12K	0.53 (-0.03)
W cut-off=0.025	0.52 (-0.04)	W cut-off=0.1	0.63 (+0.07)
Mylyn 3.0 (Baseline MIC = 0.36)			
K=300	0.30 (-0.06)	K=600	0.28 (-0.08)
K=400	0.30 (-0.06)	K=700	0.43 (+0.07)
II=8K	0.31 (-0.05)	II=11K	0.31 (-0.05)
II=9K	0.26 (-0.10)	II=12K	0.34 (-0.02)
W cut-off=0.025	0.33 (-0.03)	W cut-off=0.1	0.30 (-0.06)
Eclipse 2.0 (Baseline MIC = 0.20)			
K=300	0.25 (+0.05)	K=600	0.21 (+0.01)
K=400	0.25 (+0.05)	K=700	0.28 (+0.08)
II=8K	0.22 (+0.02)	II=11K	0.19 (-0.01)
II=9K	0.22 (+0.02)	II=12K	0.22 (+0.02)
W cut-off=0.025	0.21 (+0.01)	W cut-off=0.1	0.21 (+0.01)
Eclipse 2.1 (Baseline MIC = 0.21)			
K=300	0.27 (+0.06)	K=600	0.20 (-0.01)
K=400	0.18 (-0.03)	K=700	0.25 (+0.04)
II=8K	0.27 (+0.06)	II=11K	0.20 (-0.01)
II=9K	0.22 (+0.01)	II=12K	0.24 (+0.03)
W cut-off=0.025	0.25 (+0.04)	W cut-off=0.1	0.22 (+0.01)
Eclipse 3.0 (Baseline MIC = 0.24)			
K=300	0.28 (+0.04)	K=600	0.23 (-0.01)
K=400	0.25 (+0.01)	K=700	0.21 (-0.03)
II=8K	0.25 (+0.01)	II=11K	0.20 (-0.04)
II=9K	0.21 (-0.03)	II=12K	0.24 (—)
W cut-off=0.025	0.25 (+0.01)	W cut-off=0.1	0.22 (-0.02)
NetBeans 4.0 (Baseline MIC = 0.24)			
K=300	0.20 (-0.04)	K=600	0.25 (+0.01)
K=400	0.19 (-0.05)	K=700	0.26 (+0.02)
II=8K	0.24 (—)	II=11K	0.29 (+0.05)
II=9K	0.23 (-0.01)	II=12K	0.28 (+0.04)
W cut-off=0.025	0.27 (+0.03)	W cut-off=0.1	0.26 (+0.02)
NetBeans 5.0 (Baseline MIC = 0.20)			
K=300	0.20 (—)	K=600	0.19 (-0.01)
K=400	0.21 (+0.01)	K=700	0.19 (-0.01)
II=8K	0.22 (+0.02)	II=11K	0.21 (+0.01)
II=9K	0.23 (+0.03)	II=12K	0.25 (+0.05)
W cut-off=0.025	0.21 (+0.01)	W cut-off=0.1	0.19 (-0.01)
NetBeans 5.5.1 (Baseline MIC = 0.19)			
K=300	0.19 (—)	K=600	0.18 (-0.01)
K=400	0.18 (-0.01)	K=700	0.23 (+0.04)
II=8K	0.27 (+0.08)	II=11K	0.20 (+0.01)
II=9K	0.18 (-0.01)	II=12K	0.27 (+0.08)
W cut-off=0.025	0.20 (+0.01)	W cut-off=0.1	0.19 (—)

Table 2: Results of the parameter sensitivity analysis of the parameters that may influence the *prediction result*. The baseline parameters and their values are shown in the table. For each system, we show the precision and recall when the parameter changes. The values in the parentheses indicate the increase/decrease from the baseline precision and recall.

Baseline Values: K=500, II=10,000, W cut-off=0.05, δ=0.01, PCA cut-off=90%

Lower			*Higher*		
New Value	Precision	Recall	New Value	Precision	Recall
Mylyn 2.0 (Baseline Precision = 0.82, Base Recall = 0.92)					
K=300	0.81 (-0.01)	0.76 (-0.16)	K=600	0.80 (-0.02)	0.89 (-0.03)
400	0.80 (-0.02)	0.91 (-0.01)	700	0.90 (+0.08)	0.96 (+0.04)
II=8K	0.85 (+0.03)	0.98 (+0.06)	II=11K	0.78 (-0.04)	0.92 (—)
9K	0.84 (+0.02)	0.97 (+0.05)	12K	0.86 (+0.04)	0.95 (+0.03)
W cut-off=0.025	0.91 (+0.09)	0.89 (-0.03)	W cut-off=0.1	0.79 (-0.03)	0.93 (+0.01)
δ=0.005	0.82(—)	0.95 (+0.03)	δ=0.02	0.82 (—)	0.92 (—)
PCA cut-off=80%	0.82 (—)	0.92 (—)	PCA cut-off=95%	0.82 (—)	0.92 (—)
Mylyn 3.0 (Baseline Precision = 0.78, Base Recall = 0.79)					
K=300	0.88 (+0.09)	0.70 (-0.09)	K=600	0.63 (-0.15)	0.85 (+0.06)
400	0.74 (-0.04)	0.64 (-0.15)	700	0.52 (-0.26)	0.89 (+0.07)
II=8K	0.79 (+0.01)	0.78 (-0.01)	II=11K	0.76 (-0.02)	0.74 (-0.05)
9K	0.73 (-0.05)	0.78 (-0.01)	12K	0.78 (—)	0.76 (-0.03)
W cut-off=0.025	0.77 (-0.01)	0.74 (-0.05)	W cut-off=0.1	0.71 (-0.07)	0.76 (-0.03)
δ=0.005	0.78 (—)	0.78 (-0.01)	δ=0.02	0.78 (—)	0.79 (—)
PCA cut-off=80%	0.78 (—)	0.79 (—)	PCA cut-off=95%	0.78 (—)	0.79 (—)
Eclipse 2.1 (Baseline Precision = 0.79, Base Recall = 0.63)					
K=300	0.86 (+0.07)	0.83 (+0.20)	K=600	0.85 (+0.06)	0.72 (+0.09)
400	0.82 (+0.03)	0.63 (—)	700	0.74 (-0.05)	0.65 (+0.02)
II=8K	0.79 (—)	0.62 (-0.01)	II=11K	0.80 (+0.01)	0.61 (-0.02)
9K	0.77 (-0.02)	0.67 (+0.04)	12K	0.80 (+0.01)	0.65 (+0.02)
W cut-off=0.025	0.79 (—)	0.62 (-0.01)	W cut-off=0.1	0.78 (-0.01)	0.65 (+0.02)
δ=0.005	0.79 (—)	0.63 (—)	δ=0.02	0.81 (+0.02)	0.63 (—)
PCA cut-off=80%	0.79 (—)	0.63 (—)	PCA cut-off=95%	0.79 (—)	0.63 (—)
Eclipse 3.0 (Baseline Precision = 0.84, Base Recall = 0.79)					
K=300	0.73 (-0.11)	0.94 (+0.15)	K=600	0.77 (-0.07)	0.86 (+0.07)
400	0.78 (-0.06)	0.84 (+0.05)	700	0.75 (-0.09)	0.78 (-0.01)
II=8K	0.80 (-0.04)	0.77 (-0.02)	II=11K	0.84 (—)	0.78 (-0.01)
9K	0.80 (-0.04)	0.79 (—)	12K	0.81 (-0.03)	0.79 (—)
W cut-off=0.025	0.82 (-0.02)	0.78 (-0.01)	W cut-off=0.1	0.84 (—)	0.81 (+0.02)
δ=0.005	0.84 (—)	0.81 (+0.02)	δ=0.02	0.81 (-0.03)	0.79 (—)
PCA cut-off=80%	0.84 (—)	0.79 (—)	PCA cut-off=95%	0.84 (—)	0.79 (—)
NetBeans 5.0 (Baseline Precision = 0.65, Base Recall = 0.60)					
K=300	0.56 (-0.09)	0.63 (+0.03)	K=600	0.67 (+0.02)	0.58 (-0.02)
400	0.60 (-0.05)	0.63 (+0.03)	700	0.68 (+0.03)	0.60 (—)
II=8K	0.64 (-0.01)	0.62 (+0.02)	II=11K	0.64 (-0.01)	0.59 (-0.01)
9K	0.63 (-0.02)	0.59 (-0.01)	12K	0.61 (-0.04)	0.61 (+0.01)
W cut-off=0.025	0.65 (—)	0.57 (-0.03)	W cut-off=0.1	0.65 (—)	0.63 (+0.03)
δ=0.005	0.65 (—)	0.60 (—)	δ=0.02	0.63 (-0.02)	0.60 (—)
PCA cut-off=80%	0.65 (—)	0.60 (—)	PCA cut-off=95%	0.65 (—)	0.60 (—)
NetBeans 5.5.1 (Baseline Precision = 0.64, Base Recall = 0.86)					
K=300	0.58 (-0.06)	0.88 (+0.02)	K=600	0.65 (+0.01)	0.79 (-0.07)
400	0.67 (+0.03)	0.94 (+0.08)	700	0.68 (+0.04)	0.90 (+0.04)
II=8K	0.65 (+0.01)	0.88 (+0.02)	II=11K	0.65 (+0.01)	0.85 (-0.01)
9K	0.68 (+0.04)	0.88 (+0.02)	12K	0.63 (-0.01)	0.83 (-0.03)
W cut-off=0.025	0.66 (+0.02)	0.86 (—)	W cut-off=0.1	0.62 (-0.02)	0.85 (-0.01)
δ=0.005	0.65 (+0.01)	0.86 (—)	δ=0.02	0.61 (-0.03)	0.85 (-0.01)
PCA cut-off=80%	0.64 (—)	0.86 (—)	PCA cut-off=95%	0.64 (—)	0.86 (—)