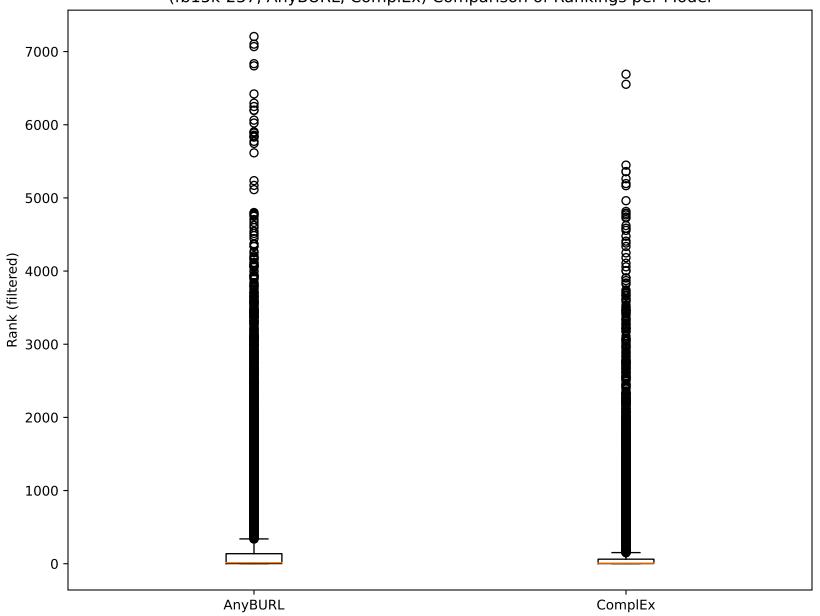
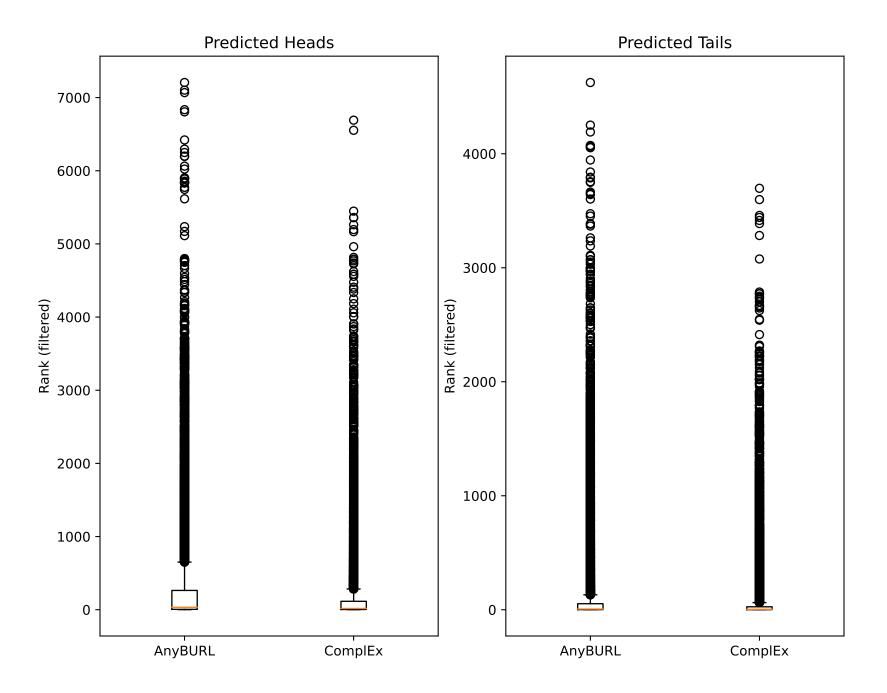
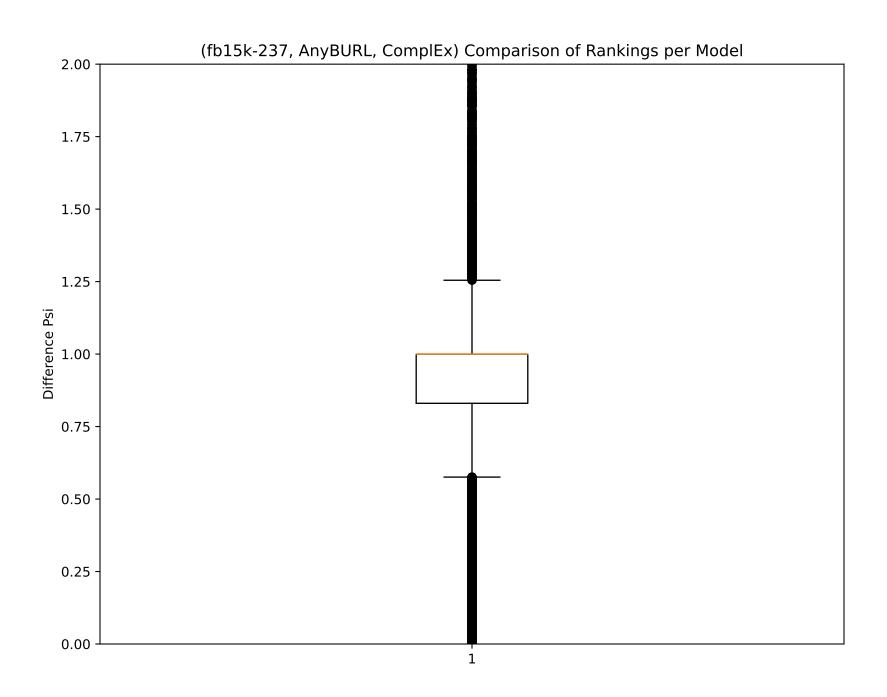
## (fb15k-237, AnyBURL, ComplEx) Metrics

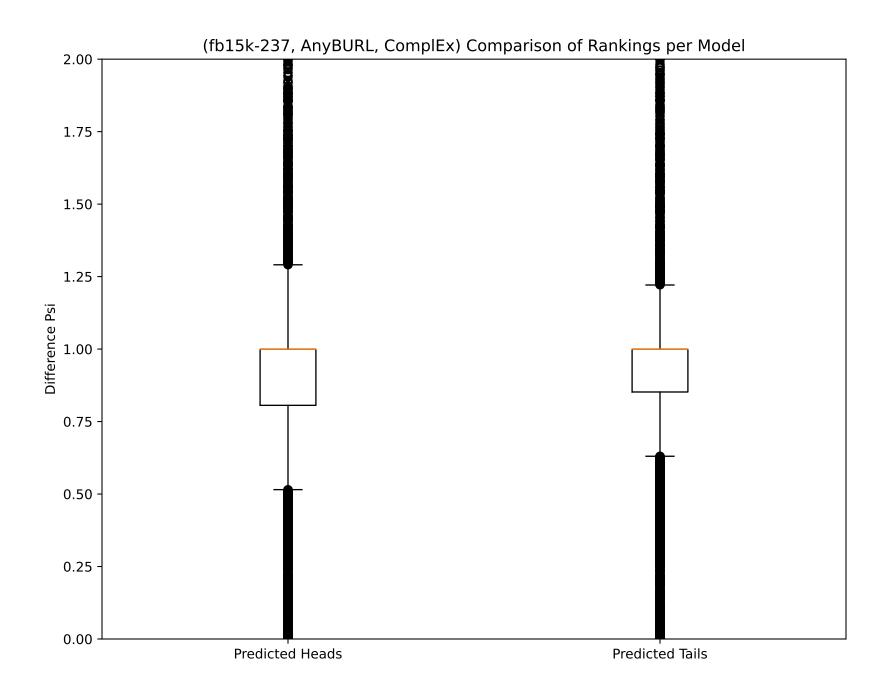
	MRR	Hits@1	Hits@10	Hits@100
AnyBURL	0.298	0.217	0.461	0.720
ComplEx Combined	0.345	0.247	0.540	0.797
ComplEx 1	0.360	0.265	0.554	0.806
ComplEx 2	0.359	0.262	0.553	0.806
ComplEx 3	0.360	0.263	0.554	0.805
ComplEx 4	0.360	0.264	0.555	0.808
ComplEx 5	0.362	0.265	0.557	0.808

(fb15k-237, AnyBURL, ComplEx) Comparison of Rankings per Model

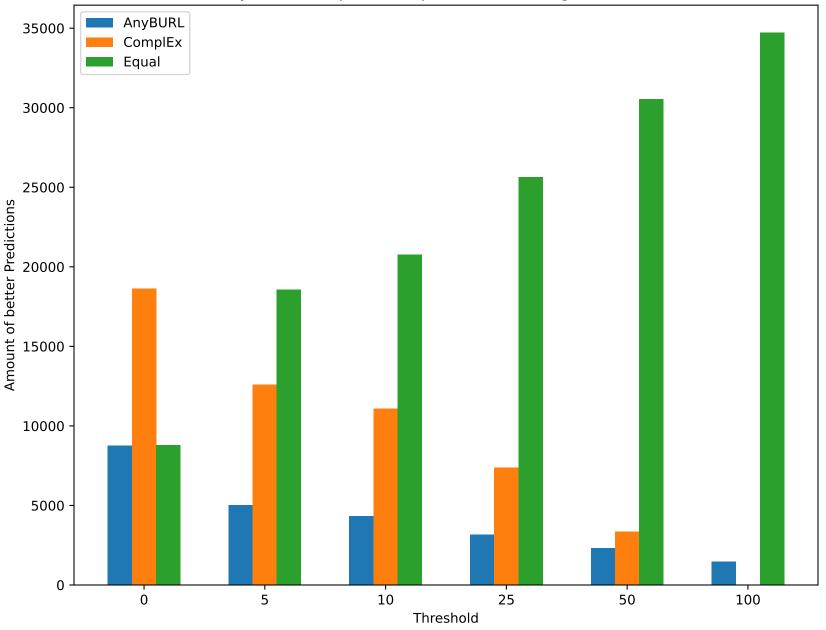




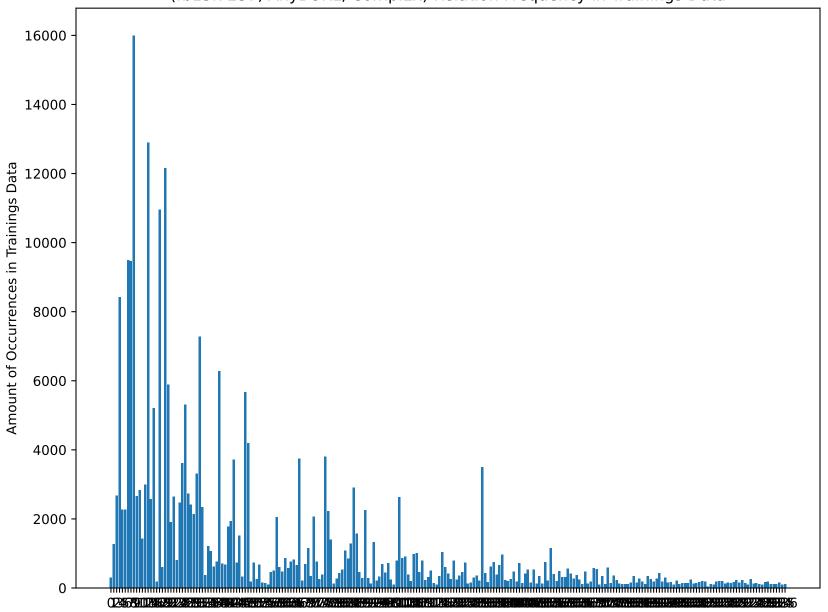




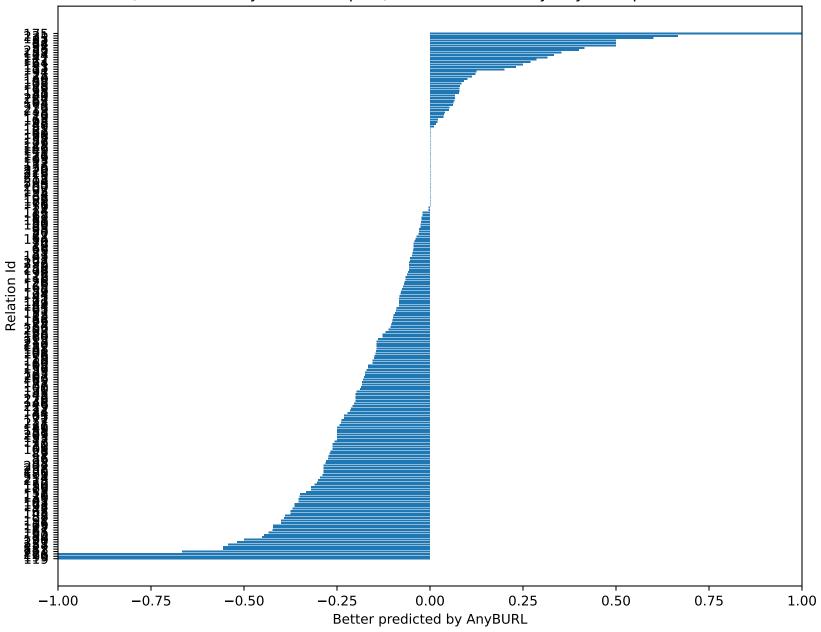
(fb15k-237, AnyBURL, ComplEx) Comparison of Rankings for different Thresholds



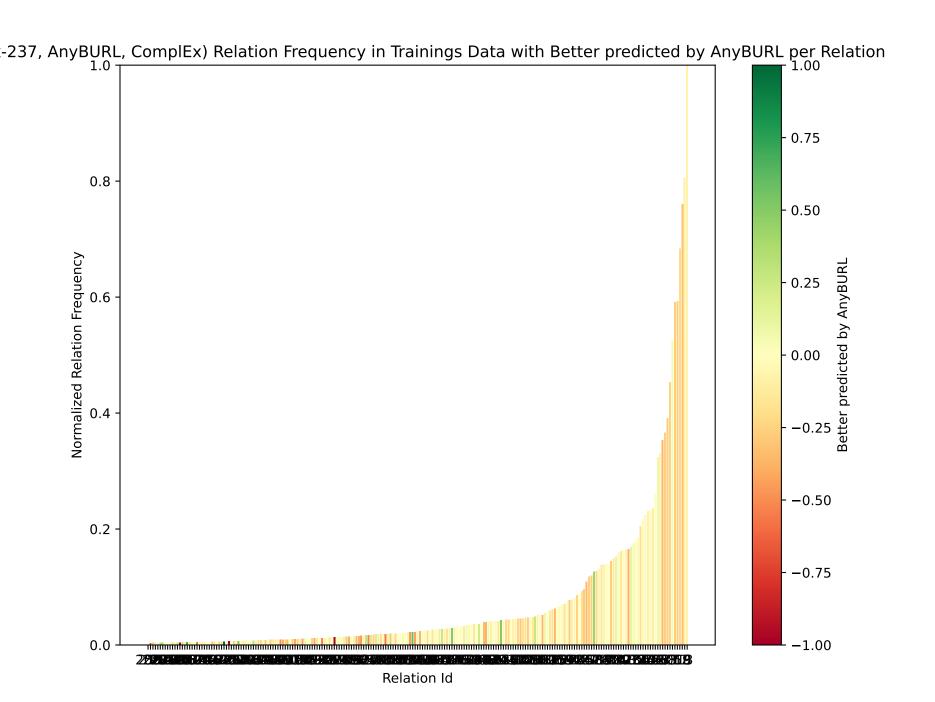
(fb15k-237, AnyBURL, ComplEx) Relation Frequency in Trainings Data



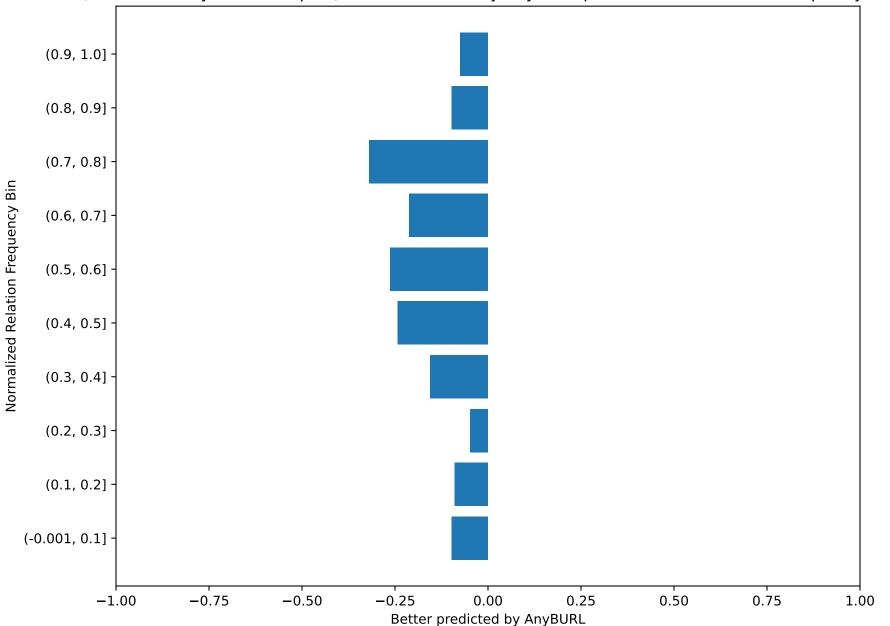
(fb15k-237, AnyBURL, ComplEx) Better Predicted by AnyBURL per Relation



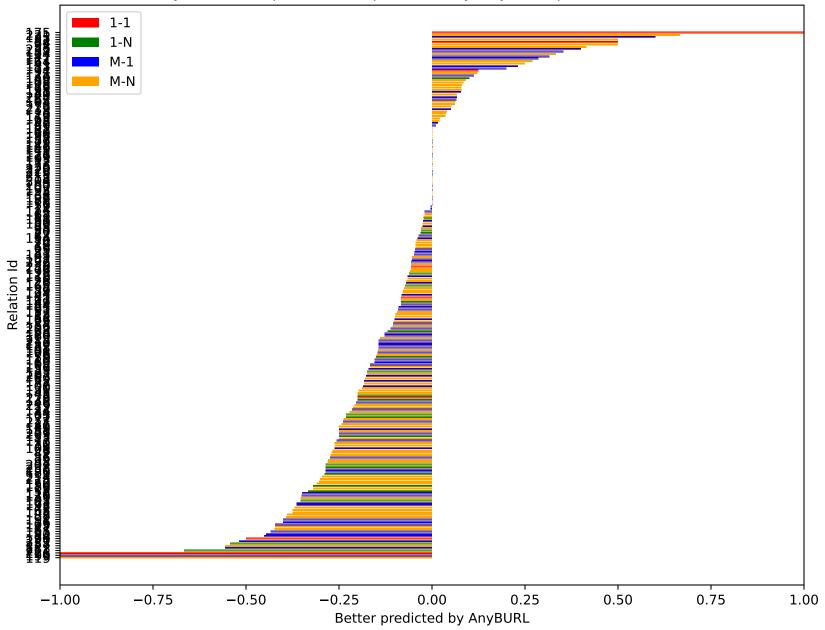
-237, AnyBURL, ComplEx) Better predicted by AnyBURL per Relation with Relation Frequency in Trainings Data 8.0 0.75 - 0.7 0.50 0.6 Normalized Relation Frequency Better predicted by AnyBURL 0.25 - 0.5 0.00 -0.25-0.500.2 -0.750.1 -1.000.0 Relation Id

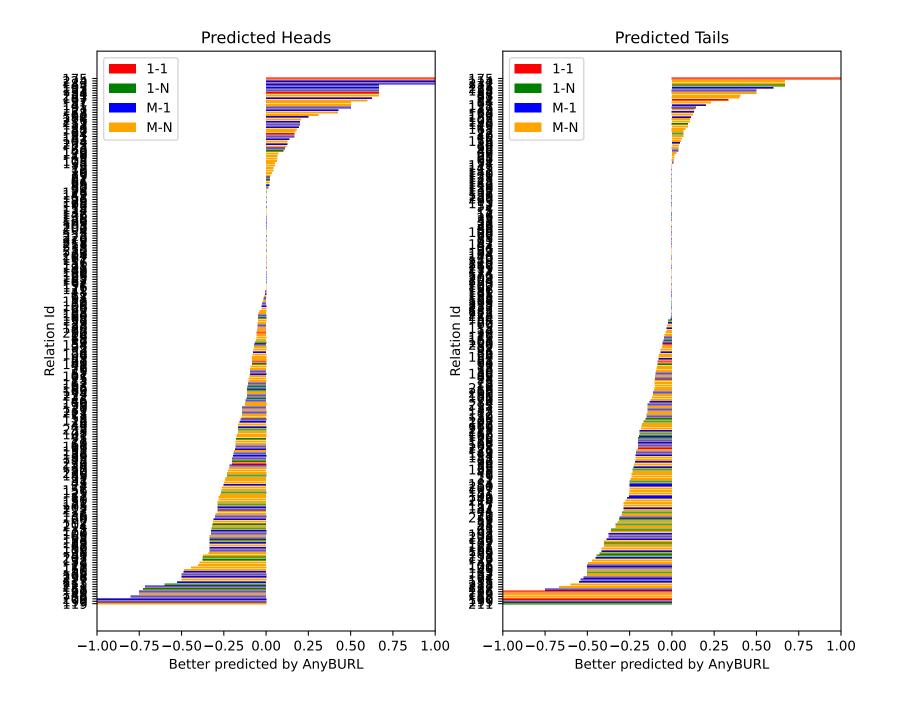


(fb15k-237, AnyBURL, ComplEx) Better Predicted by AnyBURL per Normalized Relation Frequency Bin



(fb15k-237, AnyBURL, ComplEx) Better predicted by AnyBURL per Relation with Relation Class



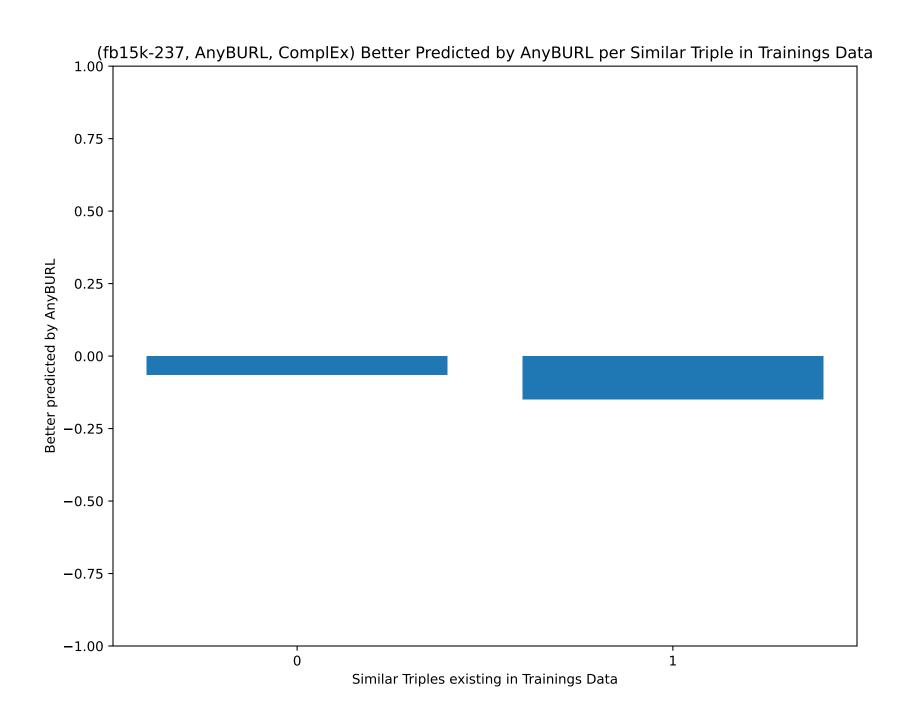


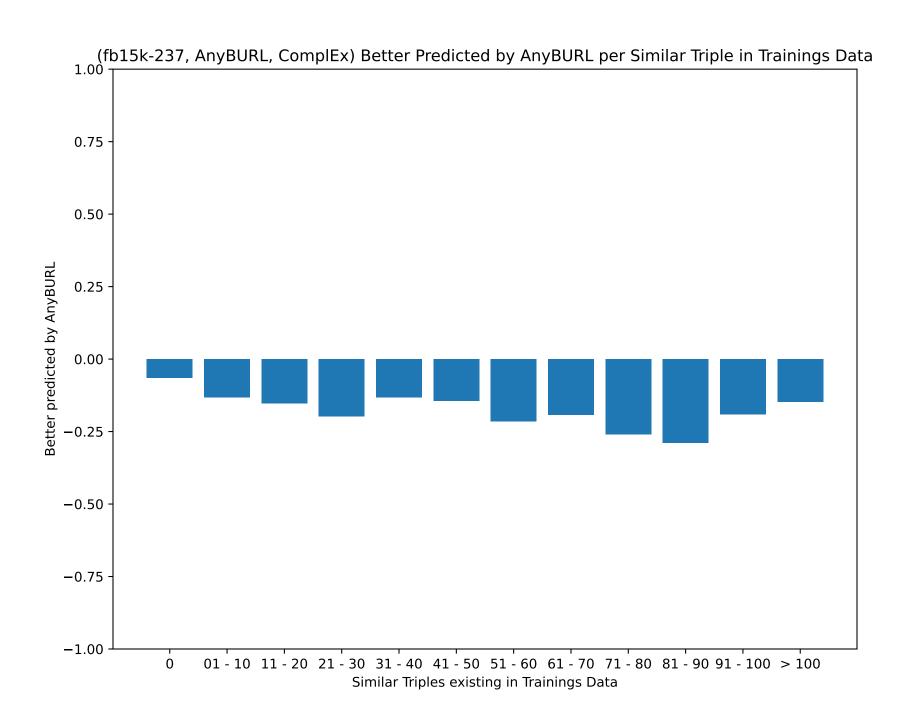
## (fb15k-237, AnyBURL, ComplEx) Better predicted per Relation Class in %

	AnyBURL	ComplEx	Equal
1-1	5.660%	5.660%	88.679%
1-N	13.054%	27.192%	59.754%
M-1	8.644%	16.146%	75.210%
M-N	9.565%	24.994%	65.440%

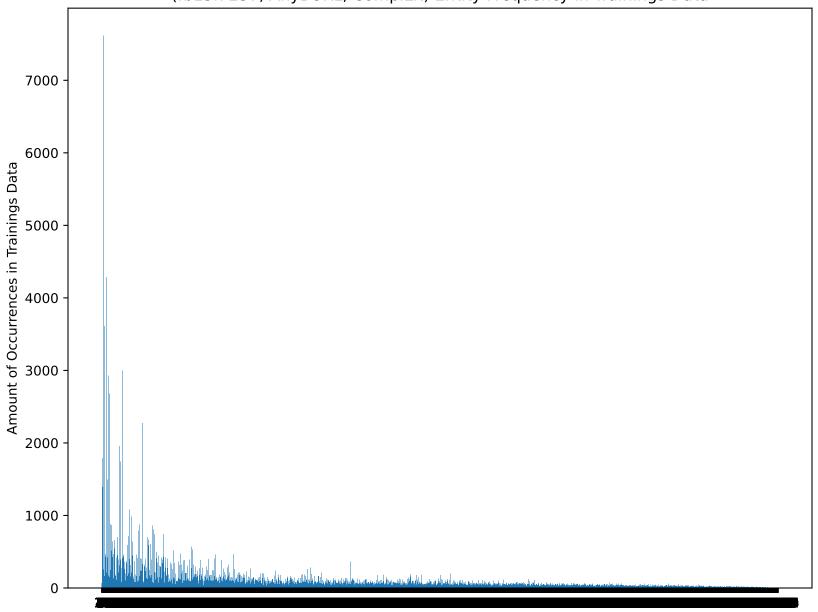
## (fb15k-237, AnyBURL, ComplEx) Better predicted per Relation Class in % (cleaned)

	AnyBURL	ComplEx	Equal
1-1	5.660%	5.660%	88.679%
1-N	12.447%	22.303%	65.249%
M-1	7.041%	15.097%	77.862%
M-N	9.565%	24.994%	65.440%



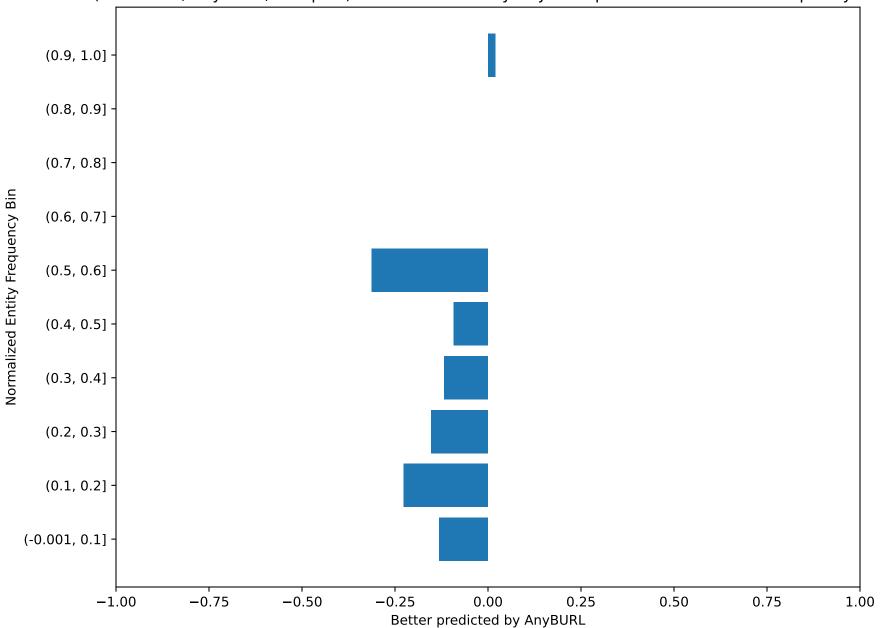


(fb15k-237, AnyBURL, ComplEx) Entity Frequency in Trainings Data



Entity Id

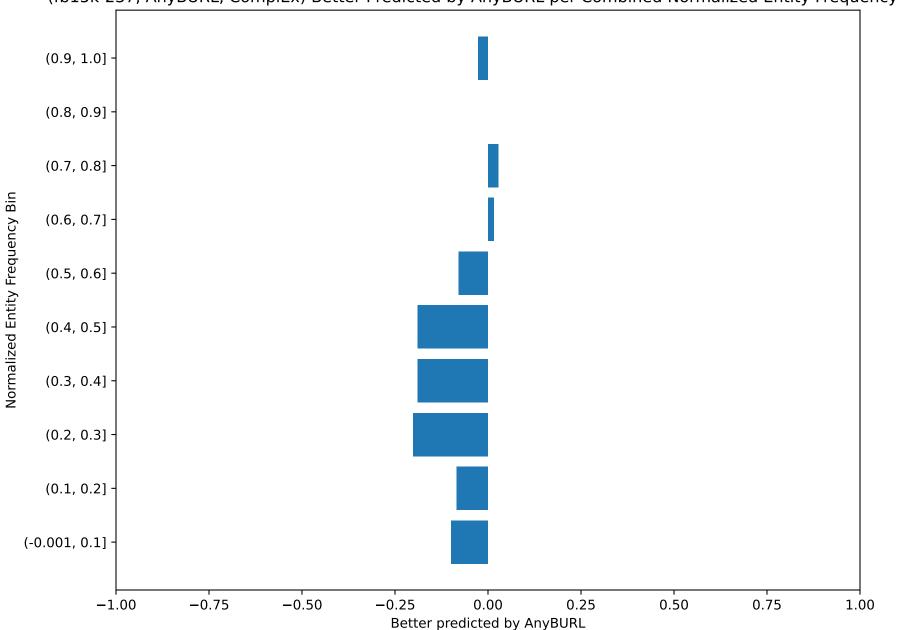
(fb15k-237, AnyBURL, ComplEx) Better Predicted by AnyBURL per Normalized Head Frequency Bin



(fb15k-237, AnyBURL, ComplEx) Better Predicted by AnyBURL per Normalized Tail Frequency Bin (0.9, 1.0] (0.8, 0.9] -(0.7, 0.8]Normalized Entity Frequency Bin (0.6, 0.7] -(0.5, 0.6](0.4, 0.5](0.3, 0.4] -(0.2, 0.3] -(0.1, 0.2](-0.001, 0.1] -0.75-0.50-0.250.00 0.25 0.50 0.75 -1.001.00

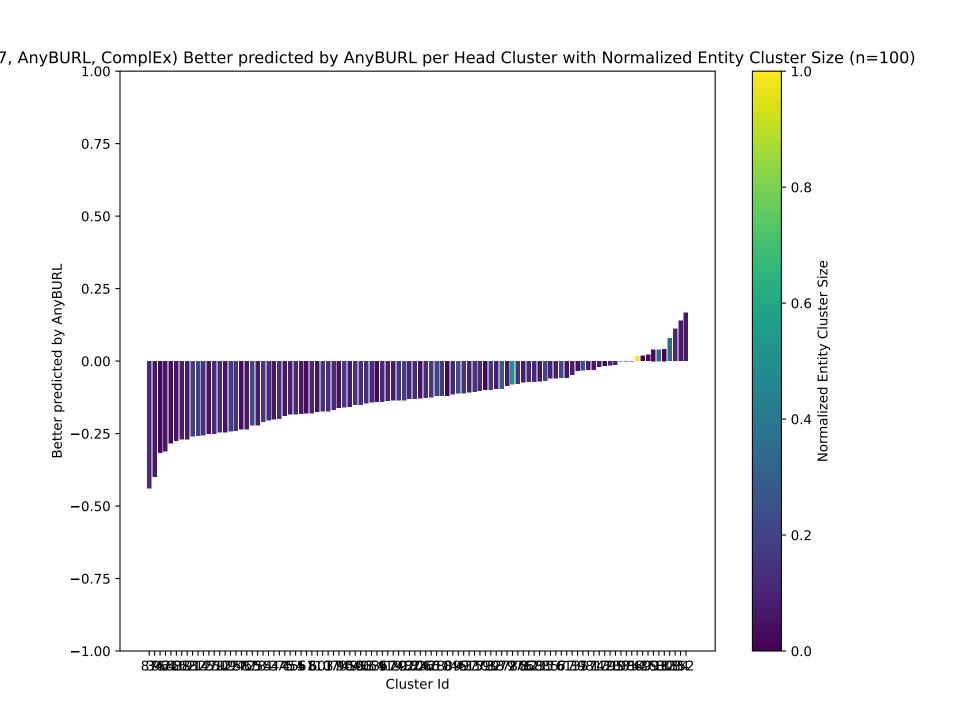
Better predicted by AnyBURL

(fb15k-237, AnyBURL, ComplEx) Better Predicted by AnyBURL per Combined Normalized Entity Frequency Bin

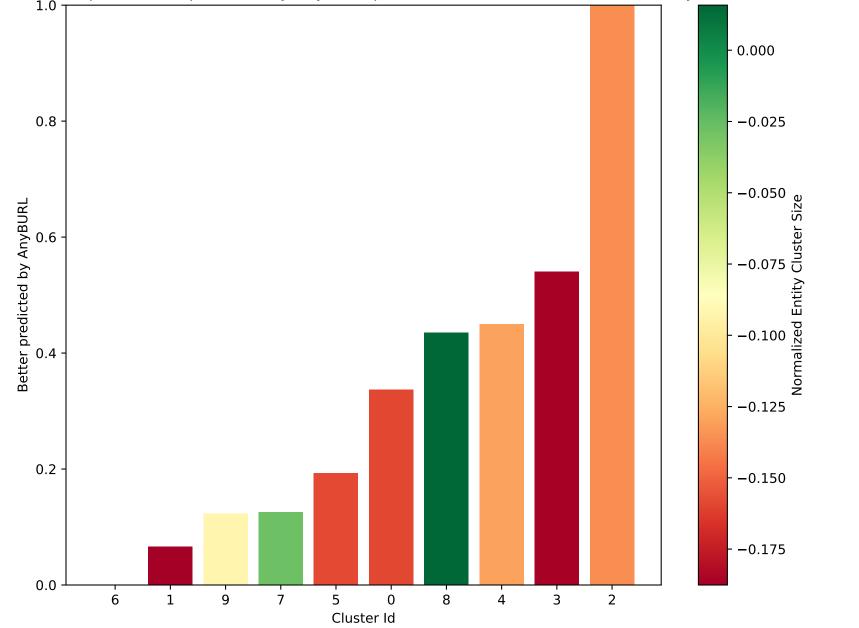


37, AnyBURL, ComplEx) Better predicted by AnyBURL per Head Cluster with Normalized Entity Cluster Size (n=10) 0.75 - 0.8 0.50 Normalized Entity Cluster Size Better predicted by AnyBURL 0.25 0.00 -0.25-0.500.2 -0.75L 0.0 -1.005 2 ż 3 6 8 1 Ó 4 9 Cluster Id

37, AnyBURL, ComplEx) Better predicted by AnyBURL per Head Cluster with Normalized Entity Cluster Size (n=25) 0.75 - 0.8 0.50 Better predicted by AnyBURL 0.25 0.00 -0.25-0.50- 0.2 -0.75-1.000.0 3 11 24 15 18 16 4 7 12 20 22 2 10 23 14 6 9 17 0 1 8 5 13 21 19 Cluster Id



7, AnyBURL, ComplEx) Better predicted by AnyBURL per Head Cluster with Normalized Entity Cluster Size (n=10)



37, AnyBURL, ComplEx) Better predicted by AnyBURL per Tail Cluster with Normalized Entity Cluster Size (n=10) 0.75 - 0.8 0.50 Normalized Entity Cluster Size Better predicted by AnyBURL 0.25 0.00 -0.25-0.500.2 -0.75-1.00L <sub>0.0</sub> 5 9 2 0 Cluster Id 2 ż 3 i 8 6 4

37, AnyBURL, ComplEx) Better predicted by AnyBURL per Tail Cluster with Normalized Entity Cluster Size (n=25) 0.75 - 0.8 0.50 Better predicted by AnyBURL 0.25 0.00 -0.25-0.50- 0.2 -0.75-1.000.0 11 9 22 6 24 20 18 23 15 2 14 16 4 12 10 3 1 8 7 0 19 5 17 21 13 Cluster Id

37, AnyBURL, ComplEx) Better predicted by AnyBURL per Tail Cluster with Normalized Entity Cluster Size (n=100) 0.75 - 0.8 0.50 Normalized Entity Cluster Size Better predicted by AnyBURL 0.25 - 0.6 0.00 -0.25 -0.500.2 -0.75-1.000.0 \$9551 369243932451164\$945950\$225\$\$1585146685102946595\$C\$\$47252225842771578453954556594975552224853986554

Cluster Id

37, AnyBURL, ComplEx) Better predicted by AnyBURL per Tail Cluster with Normalized Entity Cluster Size (n=10) 0.00 0.8 - -0.05 Normalized Entity Cluster Size Better predicted by AnyBURL -0.10 0.2 - -0.20

7

9

1

5 0 Cluster Id 8

4

3

2

0.0

6

-0.25