

Results of EX1 Local Model(1)

	precision	recall	f1-score	support	cohen kappa	balanced acc	local
b	0.875000	0.777778	0.823529	9.00000	0.76	0.86715	fruit
nb	0.916667	0.956522	0.936170	23.00000	0.76	0.86715	fruit
accuracy	0.906250	0.906250	0.906250	0.90625	0.76	0.86715	fruit
macro avg	0.895833	0.867150	0.879850	32.00000	0.76	0.86715	fruit
weighted avg	0.904948	0.906250	0.904490	32.00000	0.76	0.86715	fruit

	feature	importance
4	depthfromtopsynset_normalised	0.516429
3	nrpartrels_normalised	0.180609
5	glosslength_normalised	0.090309
0	ngrams_last_mean	0.076081
6	minwordlength	0.075185
8	polyscore_max	0.030379
2	nrhypos	0.018508
7	nroflemmas	0.008751
1	nrdirhypers	0.003749

	precision	recall	f1-score	support	cohen kappa	balanced acc	local	:
b	0.750000	0.750000	0.750000	4.000000	0.706522	0.853261	tool	
nb	0.956522	0.956522	0.956522	23.000000	0.706522	0.853261	tool	
accuracy	0.925926	0.925926	0.925926	0.925926	0.706522	0.853261	tool	
macro avg	0.853261	0.853261	0.853261	27.000000	0.706522	0.853261	tool	
weighted avg	0.925926	0.925926	0.925926	27.000000	0.706522	0.853261	tool	

	feature	importance
4	depthfromtopsynset_normalised	0.456276
0	ngrams_last_mean	0.265456
5	glosslength_normalised	0.088887
6	minwordlength	0.081939
8	polyscore_max	0.063619
2	nrhypos	0.024206
3	nrpartrels_normalised	0.010043
7	nroflemmas	0.00766
1	nrdirhypers	0.001914

	precision	recall	f1-score	support	cohen kappa	balanced acc	local
b	0.500000	0.714286	0.588235	7.000000	0.397351	0.725564	music
nb	0.875000	0.736842	0.800000	19.000000	0.397351	0.725564	music
accuracy	0.730769	0.730769	0.730769	0.730769	0.397351	0.725564	music
macro avg	0.687500	0.725564	0.694118	26.000000	0.397351	0.725564	music
weighted avg	0.774038	0.730769	0.742986	26.000000	0.397351	0.725564	music

	feature	importance
5	glosslength_normalised	0.380058
0	ngrams_last_mean	0.168595
4	depthfromtopsynset_normalised	0.155645
6	minwordlength	0.109346
2	nrhypos	0.084413
8	polyscore_max	0.048277
7	nroflemmas	0.035092
3	nrpartrels_normalised	0.016241
1	nrdirhypers	0.002332

Results of EX1

Local Model(2)

	precision	recall	f1-score	support	cohen kappa	balanced acc	local
b	1.000000	0.333333	0.500000	3.000000	0.478873	0.666667	furn
nb	0.944444	1.000000	0.971429	34.000000	0.478873	0.666667	furn
accuracy	0.945946	0.945946	0.945946	0.945946	0.478873	0.666667	furn
macro avg	0.972222	0.666667	0.735714	37.000000	0.478873	0.666667	furn
weighted avg	0.948949	0.945946	0.933205	37.000000	0.478873	0.666667	furn

	feature	importance
0	ngrams_last_mean	0.223972
4	depthfromtopsynset_normalised	0.213284
3	nrpartrels_normalised	0.205542
2	nrhypos	0.112778
6	minwordlength	0.096796
5	glosslength_normalised	0.084313
8	polyscore_max	0.033391
7	nrofllemmas	0.028801
1	nrdirhypers	0.001124

	precision	recall	f1-score	support	cohen kappa	balanced acc	local
b	0.666667	0.500000	0.571429	4.000000	0.539185	0.738889	garm
nb	0.956522	0.977778	0.967033	45.000000	0.539185	0.738889	garm
accuracy	0.938776	0.938776	0.938776	0.938776	0.539185	0.738889	garm
macro avg	0.811594	0.738889	0.769231	49.000000	0.539185	0.738889	garm
weighted avg	0.932860	0.938776	0.934739	49.000000	0.539185	0.738889	garm

	feature	importance
2	nrhypos	0.278247
0	ngrams_last_mean	0.183312
4	depthfromtopsynset_normalised	0.167373
6	minwordlength	0.146328
5	glosslength_normalised	0.133383
8	polyscore_max	0.049269
7	nrofllemmas	0.025633
3	nrpartrels_normalised	0.012891
1	nrdirhypers	0.003564

Results of EX1 Global Model

	precision	recall	f1-score	support	cohen kappa	balanced acc	global
b	0.724138	0.913043	0.807692	23.000000	0.721663	0.889855	3
nb	0.962963	0.866667	0.912281	60.000000	0.721663	0.889855	3
accuracy	0.879518	0.879518	0.879518	0.879518	0.721663	0.889855	3
macro avg	0.843550	0.889855	0.859987	83.000000	0.721663	0.889855	3
weighted avg	0.896783	0.879518	0.883298	83.000000	0.721663	0.889855	3

	precision	recall	f1-score	support	cohen kappa	balanced acc	global
b	0.756098	0.756098	0.756098	41.000000	0.677357	0.838679	5
nb	0.921260	0.921260	0.921260	127.000000	0.677357	0.838679	5
accuracy	0.880952	0.880952	0.880952	0.880952	0.677357	0.838679	5
macro avg	0.838679	0.838679	0.838679	168.000000	0.677357	0.838679	5
weighted avg	0.880952	0.880952	0.880952	168.000000	0.677357	0.838679	5

	feature	importance
4	depthfromtopsynset_normalised	0.463347
5	glosslength_normalised	0.150995
0	ngrams_last_mean	0.146507
6	minwordlength	0.083027
3	nrpartrels_normalised	0.059674
2	nrhypos	0.041617
8	polyscore_max	0.035909
7	nrofllemmas	0.015812
1	nrdirhypers	0.003114

	feature	importance
4	depthfromtopsynset_normalised	0.357654
0	ngrams_last_mean	0.164617
5	glosslength_normalised	0.127739
6	minwordlength	0.11503
3	nrpartrels_normalised	0.109267
2	nrhypos	0.053442
8	polyscore_max	0.043895
7	nrofllemmas	0.026327
1	nrdirhypers	0.002028

Results of EX1 Unseen Domain Model(1)

	precision	recall	f1-score	support	cohen kappa	balanced acc	unseen
b	0.843750	0.947368	0.892562	57.000000	0.82487	0.923179	fruit
nb	0.967391	0.898990	0.931937	99.000000	0.82487	0.923179	fruit
accuracy	0.916667	0.916667	0.916667	0.916667	0.82487	0.923179	fruit
macro avg	0.905571	0.923179	0.912250	156.000000	0.82487	0.923179	fruit
weighted avg	0.922215	0.916667	0.917550	156.000000	0.82487	0.923179	fruit

Slightly vary in 'cohen kappa' from the paper

	precision	recall	f1-score	support	cohen kappa	balanced acc	unseen
b	0.740741	0.800000	0.769231	25.000000	0.713259	0.867593	tool
nb	0.952830	0.935185	0.943925	108.000000	0.713259	0.867593	tool
accuracy	0.909774	0.909774	0.909774	0.909774	0.713259	0.867593	tool
macro avg	0.846785	0.867593	0.856578	133.000000	0.713259	0.867593	tool
weighted avg	0.912964	0.909774	0.911088	133.000000	0.713259	0.867593	tool

	precision	recall	f1-score	support	cohen kappa	balanced acc	unseen
b	0.761905	0.680851	0.719101	47.000000	0.566474	0.777134	music
nb	0.821429	0.873418	0.846626	79.000000	0.566474	0.777134	music
accuracy	0.801587	0.801587	0.801587	0.801587	0.566474	0.777134	music
macro avg	0.791667	0.777134	0.782863	126.000000	0.566474	0.777134	music
weighted avg	0.799225	0.801587	0.799057	126.000000	0.566474	0.777134	music

	feature	importance
4	depthfromtopsynset_normalised	0.346833
0	ngrams_last_mean	0.219274
5	glosslength_normalised	0.171985
6	minwordlength	0.107996
2	nrhypos	0.055211
8	polyscore_max	0.040668
7	nrofllemmas	0.028876
3	nrpartrels_normalised	0.026546
1	nrdirhypers	0.00261

	feature	importance
4	depthfromtopsynset_normalised	0.365258
0	ngrams_last_mean	0.156274
5	glosslength_normalised	0.138268
3	nrpartrels_normalised	0.108714
6	minwordlength	0.103898
2	nrhypos	0.050901
8	polyscore_max	0.045222
7	nrofllemmas	0.029594
1	nrdirhypers	0.001871

	feature	importance
4	depthfromtopsynset_normalised	0.3581
3	nrpartrels_normalised	0.165338
0	ngrams_last_mean	0.136522
6	minwordlength	0.103675
5	glosslength_normalised	0.089288
2	nrhypos	0.076258
8	polyscore_max	0.040796
7	nrofllemmas	0.027899
1	nrdirhypers	0.002123

Results of EX1

Unseen Domain Model(2)

	precision	recall	f1-score	support	cohen kappa	balanced acc	unseen
b	0.306122	0.750000	0.434783	20.000000	0.330927	0.770706	furn
nb	0.962687	0.791411	0.868687	163.000000	0.330927	0.770706	furn
accuracy	0.786885	0.786885	0.786885	0.786885	0.330927	0.770706	furn
macro avg	0.634405	0.770706	0.651735	183.000000	0.330927	0.770706	furn
weighted avg	0.890931	0.786885	0.821266	183.000000	0.330927	0.770706	furn

Largely vary in 'cohen kappa' from the paper

	precision	recall	f1-score	support	cohen kappa	balanced acc	unseen
b	0.279412	0.730769	0.404255	26.000000	0.294068	0.751431	garm
nb	0.959538	0.772093	0.855670	215.000000	0.294068	0.751431	garm
accuracy	0.767635	0.767635	0.767635	0.767635	0.294068	0.751431	garm
macro avg	0.619475	0.751431	0.629963	241.000000	0.294068	0.751431	garm
weighted avg	0.886163	0.767635	0.806970	241.000000	0.294068	0.751431	garm

	feature	importance
4	depthfromtopsynset_normalised	0.396453
0	ngrams_last_mean	0.164981
5	glosslength_normalised	0.144356
6	minwordlength	0.092169
3	nrpartrels_normalised	0.089795
2	nrhypos	0.044665
8	polyscore_max	0.039389
7	nrofllemmas	0.026126
1	nrdirhypers	0.002065

	feature	importance
4	depthfromtopsynset_normalised	0.406564
5	glosslength_normalised	0.147833
0	ngrams_last_mean	0.138011
6	minwordlength	0.134541
3	nrpartrels_normalised	0.061559
2	nrhypos	0.042766
8	polyscore_max	0.041067
7	nrofllemmas	0.025817
1	nrdirhypers	0.001842