

Outcomes of the experiments with the models: *precision* (P), *recall* (R), *F 1-measure* (F 1) and *Geometric mean score* (G m)  $\pm$  standard deviation averaged over the 10 classification problems per KG

TARGET CLASS #1				
NTNames-t.nt.Class_0_59 $\equiv$ [NTNames.Human   NTNames.Some_longitude_range]				
		# Individuals		
		Positive	Negative	Unlabeled
		419	44	213
Models				
Measures	MBNB	MBNB-EM	HBM	LogReg
<i>Precision</i>	1.000 $\pm$ 0.000	1.000 $\pm$ 0.000	1.000 $\pm$ 0.000	0.915 $\pm$ 0.000
<i>Recall</i>	1.000 $\pm$ 0.000	1.000 $\pm$ 0.000	1.000 $\pm$ 0.000	0.906 $\pm$ 0.000
<i>F<sub>1</sub></i>	1.000 $\pm$ 0.000	1.000 $\pm$ 0.000	1.000 $\pm$ 0.000	0.862 $\pm$ 0.000
<i>G m</i>	1.000 $\pm$ 0.000	1.000 $\pm$ 0.000	1.000 $\pm$ 0.000	0.291 $\pm$ 0.000

TARGET CLASS #2				
NTNames-t.nt.Class_14_19 $\equiv$ [NTNames.Angel   NTNames.ContentBearingObject]				
		# Individuals		
		Positive	Negative	Unlabeled
		10	199	467
Models				
Measures	MBNB	MBNB-EM	HBM	LogReg
<i>Precision</i>	0.953 $\pm$ 0.010	0.955 $\pm$ 0.000	0.955 $\pm$ 0.000	1.000 $\pm$ 0.000
<i>Recall</i>	0.794 $\pm$ 0.027	0.952 $\pm$ 0.000	0.952 $\pm$ 0.000	0.000 $\pm$ 0.000
<i>F<sub>1</sub></i>	0.851 $\pm$ 0.018	0.929 $\pm$ 0.000	0.929 $\pm$ 0.000	0.000 $\pm$ 0.000
<i>G m</i>	0.824 $\pm$ 0.072	0.213 $\pm$ 0.000	0.213 $\pm$ 0.000	0.000 $\pm$ 0.000

TARGET CLASS #3				
NTNames-t.nt.Class_17_24≡ [NTNames.BeliefGroup   NTNames.CognitiveAgent]				
	# Individuals			
	Positive	Negative	Unlabeled	
	441	200	35	
Models				
Measures	MBNB	MBNB-EM	HBM	LogReg
Precision	1.000 ± 0.000	1.000 ± 0.000	0.969 ± 0.010	0.785 ± 0.000
Recall	1.000 ± 0.000	1.000 ± 0.000	0.966 ± 0.012	0.688 ± 0.000
F <sub>1</sub>	1.000 ± 0.000	1.000 ± 0.000	0.966 ± 0.011	0.560 ± 0.000
G <sub>m</sub>	1.000 ± 0.000	1.000 ± 0.000	0.975 ± 0.009	0.464 ± 0.000

TARGET CLASS #4				
NTNames-t.nt.Class_19_47≡ [NTNames.ContentBearingObject   NTNames.Some_antagonistOf_range]				
	# Individuals			
	Positive	Negative	Unlabeled	
	16	191	469	
	Models			
Measures	MBNB	MBNB-EM	HBM	LogReg
Precision	0.950 ± 0.011	0.954 ± 0.015	0.954 ± 0.015	1.000 ± 0.000
Recall	0.934 ± 0.044	0.952 ± 0.016	0.952 ± 0.016	0.000 ± 0.000
F <sub>1</sub>	0.926 ± 0.032	0.940 ± 0.023	0.940 ± 0.023	0.000 ± 0.000
G <sub>m</sub>	0.640 ± 0.136	0.641 ± 0.137	0.641 ± 0.137	0.000 ± 0.000

TARGET CLASS #5					
NTNames-t.nt.Class_23_39≡ [NTNames.LandArea   NTNames.ReligiousBelief]					
		# Individuals			
		Positive	Negative	Unlabeled	
		139	496	41	
Models					
Measures	MBNB	MBNB-EM	HBM	LogReg	
Precision	0.972 ± 0.006	0.977 ± 0.005	0.923 ± 0.010	0.828 ± 0.000	
Recall	0.967 ± 0.008	0.976 ± 0.006	0.879 ± 0.023	0.780 ± 0.000	
F <sub>1</sub>	0.968 ± 0.008	0.976 ± 0.006	0.887 ± 0.021	0.684 ± 0.000	
G <sub>m</sub>	0.979 ± 0.005	0.973 ± 0.008	0.921 ± 0.015	0.414 ± 0.000	

TARGET CLASS #6					
NTNames-t.nt.Class_27_14≡ [NTNames.FreshWaterArea   NTNames.Angel]					
		# Individuals			
		Positive	Negative	Unlabeled	
		9	191	476	
Models					
Measures	MBNB	MBNB-EM	HBM	LogReg	
Precision	0.930 ± 0.038	0.953 ± 0.000	0.953 ± 0.000	1.000 ± 0.000	
Recall	0.932 ± 0.040	0.950 ± 0.000	0.682 ± 0.410	0.000 ± 0.000	
F <sub>1</sub>	0.928 ± 0.037	0.926 ± 0.000	0.653 ± 0.417	0.000 ± 0.000	
G <sub>m</sub>	0.392 ± 0.280	0.218 ± 0.000	0.221 ± 0.010	0.000 ± 0.000	

TARGET CLASS #7					
NTNames-t.nt.Class_27_73≡ [NTNames.FreshWaterArea   NTNames.Some_subregionOf_range]					
		# Individuals			
		Positive	Negative	Unlabeled	
		45	520	111	
Models					
Measures	MBNB	MBNB-EM		HBM	LogReg
Precision	1.000 ± 0.000	1.000 ± 0.000		0.924 ± 0.000	0.924 ± 0.000
Recall	1.000 ± 0.000	1.000 ± 0.000		0.918 ± 0.000	0.918 ± 0.000
F <sub>1</sub>	1.000 ± 0.000	1.000 ± 0.000		0.878 ± 0.000	0.878 ± 0.000
G <sub>m</sub>	1.000 ± 0.000	1.000 ± 0.000		0.275 ± 0.000	0.275 ± 0.000

TARGET CLASS #8					
NTNames-t.nt.Class_42_34≡ [NTNames.ResidencyAttribute   NTNames.Nation]					
		# Individuals			
		Positive	Negative	Unlabeled	
		4	496	176	
Models					
Measures	MBNB	MBNB-EM	HBM	LogReg	
Precision	0.994 ± 0.000	0.993 ± 0.003	0.993 ± 0.000	0.993 ± 0.000	
Recall	0.960 ± 0.012	0.969 ± 0.018	0.993 ± 0.000	0.993 ± 0.000	
F1	0.975 ± 0.007	0.980 ± 0.010	0.990 ± 0.000	0.990 ± 0.000	
Gm	0.980 ± 0.006	0.803 ± 0.361	0.081 ± 0.000	0.081 ± 0.000	

TARGET CLASS #9					
NTNames-t.nt.Class_43_45= [NTNames.Series   NTNames.StateOrProvince]					
		# Individuals			
		Positive	Negative	Unlabeled	
		24	522	130	
Models					
Measures	MBNB	MBNB-EM	HBM	LogReg	
Precision	0.972 ± 0.002	0.983 ± 0.006	0.959 ± 0.000	0.959 ± 0.000	
Recall	0.920 ± 0.013	0.979 ± 0.009	0.957 ± 0.000	0.957 ± 0.000	
F <sub>1</sub>	0.937 ± 0.009	0.981 ± 0.008	0.936 ± 0.000	0.936 ± 0.000	
G <sub>m</sub>	0.957 ± 0.007	0.933 ± 0.030	0.202 ± 0.000	0.202 ± 0.000	

TARGET CLASS #10					
NTNames-t.nt.Class_43_67≡ [NTNames.Series   NTNames.Some_religiousBelief_range]					
		# Individuals			
		Positive	Negative	Unlabeled	
		199	191	286	
Models					
Measures	MBNB	MBNB-EM		HBM	LogReg
Precision	0.992 ± 0.009	0.993 ± 0.006		0.990 ± 0.009	1.000 ± 0.000
Recall	0.991 ± 0.010	0.993 ± 0.006		0.990 ± 0.010	0.000 ± 0.000
F <sub>1</sub>	0.991 ± 0.010	0.993 ± 0.006		0.990 ± 0.010	0.000 ± 0.000
G <sub>m</sub>	0.992 ± 0.010	0.993 ± 0.006		0.990 ± 0.010	0.000 ± 0.000

MEANS				
Models				
Measures	MBNB	MBNB-EM	HBM	LogReg
<i>Precision</i>	$0.976 \pm 0.024$	$0.981 \pm 0.019$	$0.962 \pm 0.025$	$0.941 \pm 0.074$
<i>Recall</i>	$0.950 \pm 0.060$	$0.977 \pm 0.020$	$0.929 \pm 0.089$	$0.524 \pm 0.436$
<i>F<sub>1</sub></i>	$0.958 \pm 0.045$	$0.972 \pm 0.028$	$0.917 \pm 0.097$	$0.491 \pm 0.417$
<i>G<sub>m</sub></i>	$0.876 \pm 0.195$	$0.777 \pm 0.301$	$0.552 \pm 0.369$	$0.173 \pm 0.172$

Nemenyi-Friedman results calculated over the means				
Models	MBNB	MBNB-EM	HBM	LogReg
<b>MBNB</b>	1.000000	0.900000	0.516551	0.065622
<b>MBNB_EM</b>	0.900000	1.000000	0.220908	0.013809
<b>HBM</b>	0.516551	0.220908	1.000000	0.670273
<b>LogReg</b>	0.065622	0.013809	0.670273	1.000000