

The tables 1, 2, 3 show results (accuracy and F_1 -measure) for different classifiers built in the introduced approaches on three generic datasets.

Table 1. Comparison of approaches on dataset, generated with AGPL-A.

	Accuracy				F_1 -measure			
	HVA	BFMA	SMFA	AMFA	HVA	BFMA	SMFA	AMFA
Bag	53.87	54.87	55.05	60.59	0.542	0.552	0.555	0.609
Clust	34.76	38.99	38.91	40.16	0.335	0.357	0.308	0.368
DecT	53.73	52.93	53.60	57.99	0.541	0.535	0.542	0.586
END	53.74	52.29	54.05	58.53	0.540	0.527	0.542	0.589
IBk	52.95	53.23	55.01	55.02	0.534	0.540	0.558	0.561
J48	53.21	49.34	49.51	54.52	0.535	0.493	0.495	0.545
LogB	53.32	53.91	54.23	58.05	0.529	0.548	0.551	0.590
NaBy	51.91	46.06	46.19	52.16	0.522	0.490	0.489	0.542
Regre	53.99	53.35	55.67	61.55	0.540	0.534	0.556	0.616
RoFo	53.55	52.98	54.43	59.58	0.542	0.533	0.549	0.598
SMO	38.93	54.63	54.90	60.58	0.386	0.549	0.552	0.608

Table 2. Comparison of approaches on dataset, generated with AGPL-B.

	Accuracy				F_1 -measure			
	HVA	BFMA	SMFA	AMFA	HVA	BFMA	SMFA	AMFA
Bag	39.48	39.82	40.52	51.65	0.392	0.395	0.402	0.467
Clust	34.94	33.84	34.37	38.21	0.241	0.228	0.233	0.235
DecT	40.30	39.98	40.45	49.78	0.397	0.393	0.398	0.432
END	40.63	38.25	41.21	49.55	0.398	0.380	0.407	0.448
IBk	40.36	39.44	40.84	50.48	0.400	0.391	0.404	0.448
J48	41.06	35.56	36.02	46.48	0.406	0.356	0.360	0.413
LogB	41.07	40.91	40.95	50.82	0.401	0.407	0.408	0.461
NaBy	41.09	39.18	38.80	45.46	0.400	0.385	0.384	0.393
Regre	40.71	40.93	42.25	50.84	0.402	0.402	0.415	0.488
RoFo	40.18	39.53	40.22	51.24	0.400	0.392	0.399	0.480
SMO	39.35	42.12	41.82	51.27	0.382	0.415	0.410	0.516

Table 3. Comparison of approaches on dataset, generated with AGPL-C.

	Accuracy				F_1 -measure			
	HVA	BFMA	SMFA	AMFA	HVA	BFMA	SMFA	AMFA
Bag	47.26	51.65	51.16	61.09	0.477	0.521	0.515	0.614
Clust	39.87	38.21	38.73	39.29	0.342	0.307	0.313	0.366
DecT	48.60	49.78	49.01	56.64	0.497	0.504	0.495	0.572
END	48.39	49.55	50.51	58.58	0.493	0.498	0.510	0.588
IBk	47.75	50.48	51.11	54.27	0.485	0.515	0.520	0.557
J48	47.34	46.48	47.35	54.76	0.486	0.466	0.473	0.548
LogB	48.20	50.82	51.24	58.58	0.487	0.517	0.519	0.593
NaBy	47.57	45.46	44.32	48.82	0.476	0.485	0.468	0.509
Regre	48.45	50.84	51.98	61.71	0.494	0.510	0.520	0.615
RoFo	48.76	51.24	51.12	58.94	0.494	0.515	0.515	0.593
SMO	43.62	51.27	50.16	59.76	0.431	0.524	0.516	0.602

As it can be seen above, accelerated meta-feature approach outperforms all other approaches. Best classifiers are Bagging, ClassificationViaRegression and SMO. The best achieved accuracy result, which is 61.71% is much higher than coin tossing, which gives only 25% in that case.

Table 4 shows results (accuracy and F_1 -measure) for different classifiers built in the introduced approaches on real-world data.

Table 4. Comparison of approaches on dataset, generated with AGPL-B.

	Accuracy			F_1 -measure		
	BFMA	SMFA	AMFA	BFMA	SMFA	AMFA
Bag	38.77	40.18	47.37	0.385	0.399	0.474
Clust	37.37	39.47	39.65	0.373	0.397	0.411
DecT	38.86	40.18	47.98	0.383	0.385	0.481
END	39.04	39.04	37.98	0.390	0.389	0.380
IBk	36.14	36.67	44.39	0.367	0.370	0.447
J48	34.47	37.63	41.32	0.346	0.375	0.413
LogB	40.09	38.33	46.84	0.399	0.381	0.468
NaBy	39.82	37.98	39.65	0.400	0.378	0.396

Regre	40.79	42.89	45.70	0.407	0.427	0.457
RoFo	41.67	41.40	45.35	0.416	0.413	0.454
SMO	40.88	41.05	48.60	0.407	0.410	0.489

As it can be seen from Table 4, the accelerated meta-feature approach outperforms all other approaches. Best classifiers are Bagging, Decision Trees and SMO. The best achieved accuracy result, which is 48.6%, is higher than coin tossing, which gives 33% accuracy.