

Washington Dataset Report Summary

Saurabh Katkar (A20320336)

skatkar@hawk.iit.edu

Summary:

This report details on the execution process pertaining to the performance of ICA's relational classifier using the Washington dataset.

The project gives out the data in the form of 'project', 'course', 'student', 'faculty', 'staff'.

Dataset: Washington

Report Data for Phase 1

1. For `sklearn.naive_bayes.MultinomialNB`

```
['project', 'course', 'student', 'faculty', 'staff']  
[0.82608695652173914, 0.91304347826086951, 0.78260869565217395, 0.73913043478260865,  
0.65217391304347827, 0.78260869565217395, 0.73913043478260865, 0.91304347826086951,  
0.78260869565217395, 0.86956521739130432]
```

Mean accuracy: 0.8000 +- 0.0783

```
[[ 9  1  8  3  0]  
 [ 0 58  4  4  0]  
 [ 4  1 100  2  0]  
 [ 0  0 10 17  0]  
 [ 0  0  8  1  0]]
```

2. For `sklearn.svm.SVC`

```

['project', 'course', 'student', 'faculty', 'staff']
[0.52173913043478259, 0.78260869565217395, 0.60869565217391308, 0.56521739130434778,
0.43478260869565216, 0.30434782608695654, 0.39130434782608697, 0.56521739130434778,
0.52173913043478259, 0.65217391304347827]
Mean accuracy: 0.5348 +- 0.1291
[[ 0  0 21  0  0]
 [ 0 16 50  0  0]
 [ 0  0 107  0  0]
 [ 0  0 27  0  0]
 [ 0  0  9  0  0]]

```

3. For `sklearn.linear_model.LogisticRegression`

```

['project', 'course', 'student', 'faculty', 'staff']
[0.82608695652173914, 0.91304347826086951, 0.73913043478260865, 0.82608695652173914,
0.69565217391304346, 0.86956521739130432, 0.86956521739130432, 0.91304347826086951,
0.86956521739130432, 0.91304347826086951]
Mean accuracy: 0.8435 +- 0.0706
[[ 8  1 10  2  0]
 [ 0 65  1  0  0]
 [ 0  1 104  2  0]
 [ 0  0 10 17  0]
 [ 0  0  8  1  0]]

```

Report Data for Phase 2

Aggregate= Count								
Budget	False,	False	False,	True	True,	False	True,	True
0.1		0.399516908		0.662801932		0.399516908		0.662801932
0.2		0.469021739		0.770108696		0.469021739		0.770108696
0.3		0.463975155		0.769565217		0.463975155		0.769565217
0.4		0.463043478		0.793478261		0.463043478		0.793478261
0.6		0.459782609		0.819565217		0.459782609		0.819565217
0.7		0.460869565		0.839130435		0.460869565		0.839130435
0.8		0.432608696		0.854347826		0.432608696		0.854347826
0.9		0.465217391		0.891304348		0.465217391		0.891304348

Aggregate= Prop								
Budget	False,	False	False,	True	True,	False	True,	True
0.1		0.399516908		0.662801932		0.399516908		0.662801932
0.2		0.469021739		0.770108696		0.469021739		0.770108696
0.3		0.463975155		0.769565217		0.463975155		0.769565217
0.4		0.463043478		0.793478261		0.463043478		0.793478261
0.6		0.459782609		0.819565217		0.459782609		0.819565217

0.7	0.460869565	0.839130435	0.460869565	0.839130435
0.8	0.432608696	0.854347826	0.432608696	0.854347826
0.9	0.465217391	0.891304348	0.465217391	0.891304348

Aggregate= Exist								
Budget	False,	False	False,	True	True,	False	True,	True
0.1		0.399516908		0.662801932		0.399516908		0.662801932
0.2		0.469021739		0.770108696		0.469021739		0.770108696
0.3		0.463975155		0.769565217		0.463975155		0.769565217
0.4		0.463043478		0.793478261		0.463043478		0.793478261
0.6		0.459782609		0.819565217		0.459782609		0.819565217
0.7		0.460869565		0.839130435		0.460869565		0.839130435
0.8		0.432608696		0.854347826		0.432608696		0.854347826
0.9		0.465217391		0.891304348		0.465217391		0.891304348

Report Data for Phase 3

Aggregate= Count								
Budget	False,	False	False,	True	True,	False	True,	True
0.1		0.399516908		0.662801932		0.399516908		0.662801932
0.2		0.469021739		0.770108696		0.469021739		0.770108696
0.3		0.463975155		0.769565217		0.463975155		0.769565217
0.4		0.463043478		0.793478261		0.463043478		0.793478261
0.6		0.459782609		0.819565217		0.459782609		0.819565217
0.7		0.460869565		0.839130435		0.460869565		0.839130435
0.8		0.432608696		0.854347826		0.432608696		0.854347826
0.9		0.465217391		0.891304348		0.465217391		0.891304348

Aggregate= Prop								
Budget	False,	False	False,	True	True,	False	True,	True
0.1		0.399516908		0.662801932		0.399516908		0.662801932
0.2		0.469021739		0.770108696		0.469021739		0.770108696
0.3		0.463975155		0.769565217		0.463975155		0.769565217
0.4		0.463043478		0.793478261		0.463043478		0.793478261

0.6	0.459782609	0.819565217	0.459782609	0.819565217
0.7	0.460869565	0.839130435	0.460869565	0.839130435
0.8	0.432608696	0.854347826	0.432608696	0.854347826
0.9	0.465217391	0.891304348	0.465217391	0.891304348

Aggregate= Exist								
Budget	False,	False	False,	True	True,	False	True,	True
0.1		0.399516908		0.662801932		0.399516908		0.662801932
0.2		0.469021739		0.770108696		0.469021739		0.770108696
0.3		0.463975155		0.769565217		0.463975155		0.769565217
0.4		0.463043478		0.793478261		0.463043478		0.793478261
0.6		0.459782609		0.819565217		0.459782609		0.819565217
0.7		0.460869565		0.839130435		0.460869565		0.839130435
0.8		0.432608696		0.854347826		0.432608696		0.854347826
0.9		0.465217391		0.891304348		0.465217391		0.891304348