

# NLP Project Results

May 16, 2014

## 1 Classification

### 1.1 Overall Results

Feature Unit	Feature Type	Lemmatized Sensitive	Case Tags	POS Labels	Dependency Labels	Argument	Classifier Settings	Classifier	Accuracy	Micro F1	Macro F1
Words	Binary	True	False	False	False	False	Linear SVM	C=0.1	0.80443441317	0.80443441317	0.792488246512
Words	Binary	True	False	False	False	False	Linear SVM	C=0.25	0.815985130112	0.815985130112	0.806034462248
Words	Binary	True	False	False	False	False	Linear SVM	C=0.5	0.819304301646	0.819304301646	0.810537231282
Words	Binary	True	False	False	False	False	Linear SVM	C=0.75	0.819569835369	0.819569835369	0.81142456465
Words	Binary	True	False	False	False	False	Linear SVM	C=1	0.82063197026	0.82063197026	0.812941486323
Words	tf-idf	True	False	False	False	False	Linear SVM	C=0.1	0.843069569835	0.843069569835	0.831658155667
Words	tf-idf	True	False	False	False	False	Linear SVM	C=0.25	0.849309612321	0.849309612321	0.840091472071
Words	tf-idf	True	False	False	False	False	Linear SVM	C=0.5	0.851699415826	0.851699415826	0.843933428541
Words	tf-idf	True	False	False	False	False	Linear SVM	C=0.75	0.852230483271	0.852230483271	0.844647455136
Words	tf-idf	True	False	False	False	False	Linear SVM	C=1	0.851433882103	0.851433882103	0.843996489387
Words	Count	True	False	False	False	False	Linear SVM	C=0.1	0.791290493893	0.791290493893	0.779586493634
Words	Count	True	False	False	False	False	Linear SVM	C=0.25	0.804168879448	0.804168879448	0.793812271928
Words	Count	True	False	False	False	False	Linear SVM	C=0.5	0.809081253319	0.809081253319	0.799490202665
Words	Count	True	False	False	False	False	Linear SVM	C=0.75	0.810541688794	0.810541688794	0.801341254023
Words	Count	True	False	False	False	False	Linear SVM	C=1	0.810276155072	0.810276155072	0.801333069948
Words	Binary	True	False	True	False	False	Linear SVM	C=0.1	0.801115241636	0.801115241636	0.790008162406
Words	Binary	True	False	True	False	False	Linear SVM	C=0.25	0.816648964418	0.816648964418	0.807249603956
Words	Binary	True	False	True	False	False	Linear SVM	C=0.5	0.82156133829	0.82156133829	0.813338882792
Words	Binary	True	False	True	False	False	Linear SVM	C=0.75	0.823552841211	0.823552841211	0.815771730262
Words	Binary	True	False	True	False	False	Linear SVM	C=1	0.821694105151	0.821694105151	0.81417446997
Words	tf-idf	True	False	True	False	False	Linear SVM	C=0.1	0.840414232608	0.840414232608	0.830214791822
Words	tf-idf	True	False	True	False	False	Linear SVM	C=0.25	0.849840679766	0.849840679766	0.84171540895
Words	tf-idf	True	False	True	False	False	Linear SVM	C=0.5	0.851832182687	0.851832182687	0.84389597666
Words	tf-idf	True	False	True	False	False	Linear SVM	C=0.75	0.852628783856	0.852628783856	0.845119442474
Words	tf-idf	True	False	True	False	False	Linear SVM	C=1	0.850637280935	0.850637280935	0.843224651537
Words	Count	True	False	True	False	False	Linear SVM	C=0.1	0.78916622411	0.78916622411	0.778677744036
Words	Count	True	False	True	False	False	Linear SVM	C=0.25	0.804168879448	0.804168879448	0.794949983755
Words	Count	True	False	True	False	False	Linear SVM	C=0.5	0.810276155072	0.810276155072	0.801685329047
Words	Count	True	False	True	False	False	Linear SVM	C=0.75	0.81107275624	0.81107275624	0.802405242578
Words	Count	True	False	True	False	False	Linear SVM	C=1	0.811603823686	0.811603823686	0.80302119133
Words and Predicate Argument Components	Binary	True	False	False	False	False	Linear SVM	C=0.1	0.804567180032	0.804567180032	0.792613554178
Words and Predicate Argument Components	Binary	True	False	False	False	False	Linear SVM	C=0.25	0.81691498141	0.81691498141	0.807082970832
Words and Predicate Argument Components	Binary	True	False	False	False	False	Linear SVM	C=0.5	0.819171534785	0.819171534785	0.810344373501
Words and Predicate Argument Components	Binary	True	False	False	False	False	Linear SVM	C=0.75	0.821428571429	0.821428571429	0.813302057182
Words and Predicate Argument Components	tf-idf	True	False	False	False	False	Linear SVM	C=1	0.82156133829	0.82156133829	0.813744630019
Words and Predicate Argument Components	tf-idf	True	False	False	False	False	Linear SVM	C=0.1	0.843733404142	0.843733404142	0.83196777557
Words and Predicate Argument Components	tf-idf	True	False	False	False	False	Linear SVM	C=0.25	0.849176845459	0.849176845459	0.839526785306
Words and Predicate Argument Components	tf-idf	True	False	False	False	False	Linear SVM	C=0.5	0.851035581519	0.851035581519	0.842315834133
Words and Predicate Argument Components	tf-idf	True	False	False	False	False	Linear SVM	C=0.75	0.850902814657	0.850902814657	0.842513137365
Words and Predicate Argument Components	tf-idf	True	False	False	False	False	Linear SVM	C=1	0.849973446628	0.849973446628	0.841889674061
Words and Predicate Argument Components	Count	True	False	False	False	False	Linear SVM	C=0.1	0.766595857674	0.766595857674	0.751832593866
Words and Predicate Argument Components	Count	True	False	False	False	False	Linear SVM	C=0.25	0.784917684546	0.784917684546	0.773533552499
Words and Predicate Argument Components	Count	True	False	False	False	False	Linear SVM	C=0.5	0.792618162507	0.792618162507	0.782297479091
Words and Predicate Argument Components	Count	True	False	False	False	False	Linear SVM	C=0.75	0.795671800319	0.795671800319	0.786094658591
Words and Predicate Argument Components	Count	True	False	False	False	False	Linear SVM	C=1	0.795406266596	0.795406266596	0.786032983502
Words and Predicate Argument Components	Binary	True	False	False	False	True	Linear SVM	C=0.1	0.797265002655	0.797265002655	0.78523720966
Words and Predicate Argument Components	Binary	True	False	False	False	True	Linear SVM	C=0.25	0.807886351567	0.807886351567	0.79758959005
Words and Predicate Argument Components	Binary	True	False	False	False	True	Linear SVM	C=0.5	0.81492299522	0.81492299522	0.801721048253
Words and Predicate Argument Components	Binary	True	False	False	False	True	Linear SVM	C=0.75	0.817180031864	0.817180031864	0.808919916423
Words and Predicate Argument Components	Binary	True	False	False	False	True	Linear SVM	C=1	0.817312798725	0.817312798725	0.809347903955
Words and Predicate Argument Components	tf-idf	True	False	False	False	True	Linear SVM	C=0.1	0.839086563994	0.839086563994	0.827320002462
Words and Predicate Argument Components	tf-idf	True	False	False	False	True	Linear SVM	C=0.25	0.847185342539	0.847185342539	0.837271760299
Words and Predicate Argument Components	tf-idf	True	False	False	False	True	Linear SVM	C=0.5	0.847450876261	0.847450876261	0.838293099646
Words and Predicate Argument Components	tf-idf	True	False	False	False	True	Linear SVM	C=0.75	0.849176845459	0.849176845459	0.840358528214
Words and Predicate Argument Components	tf-idf	True	False	False	False	True	Linear SVM	C=1	0.849309612321	0.849309612321	0.84066847855
Words and Predicate Argument Components	Count	True	False	False	False	True	Linear SVM	C=0.1	0.78531598513	0.78531598513	0.773177055761
Words and Predicate Argument Components	Count	True	False	False	False	True	Linear SVM	C=0.25	0.803903345725	0.803903345725	0.79298118157
Words and Predicate Argument Components	Count	True	False	False	False	True	Linear SVM	C=0.5	0.808151885289	0.808151885289	0.798521754472
Words and Predicate Argument Components	Count	True	False	False	False	True	Linear SVM	C=0.75	0.808948486458	0.808948486458	0.79933412749
Words and Predicate Argument Components	Count	True	False	False	False	True	Linear SVM	C=1	0.809745087626	0.809745087626	0.800304828783
Words and Predicate Argument Components	Binary	True	False	True	False	False	Linear SVM	C=0.1	0.802044609665	0.802044609665	0.790873046262
Words and Predicate Argument Components	Binary	True	False	True	False	False	Linear SVM	C=0.25	0.817312798725	0.817312798725	0.808120977076
Words and Predicate Argument Components	Binary	True	False	True	False	False	Linear SVM	C=0.5	0.822092405736	0.822092405736	0.814094592571
Words and Predicate Argument Components	Binary	True	False	True	False	False	Linear SVM	C=0.75	0.824614976102	0.824614976102	0.817088855389
Words and Predicate Argument Components	Binary	True	False	True	False	False	Linear SVM	C=1	0.824216675518	0.824216675518	0.817021614611
Words and Predicate Argument Components	tf-idf	True	False	True	False	False	Linear SVM	C=0.1	0.839617631439	0.839617631439	0.828752067435
Words and Predicate Argument Components	tf-idf	True	False	True	False	False	Linear SVM	C=0.25	0.847981943707	0.847981943707	0.839062814783
Words and Predicate Argument Components	tf-idf	True	False	True	False	False	Linear SVM	C=0.5	0.853425385024	0.853425385024	0.845569229449
Words and Predicate Argument Components	tf-idf	True	False	True	False	False	Linear SVM	C=0.75	0.852761550717	0.852761550717	0.844977354358
Words and Predicate Argument Components	tf-idf	True	False	True	False	False	Linear SVM	C=1	0.851964949549	0.851964949549	0.844388217746
Words and Predicate Argument Components	Count	True	False	True	False	False	Linear SVM	C=0.1	0.769915029209	0.769915029209	0.756877516925
Words and Predicate Argument Components	Count	True	False	True	False	False	Linear SVM	C=0.25	0.785448751992	0.785448751992	0.775585017051
Words and Predicate Argument Components	Count	True	False	True	False	False	Linear SVM	C=0.5	0.793149229952	0.793149229952	0.784145875618
Words and Predicate Argument Components	Count	True	False	True	False	False	Linear SVM	C=0.75	0.793149229952	0.793149229952	0.784279196674
Words and Predicate Argument Components	Count	True	False	True	False	False	Linear SVM	C=1	0.794476898566	0.794476898566	0.785876012356
Words and Predicate Argument Components	Binary	True	False	True	False	True	Linear SVM	C=0.1	0.793680297398	0.793680297398	0.782300097416
Words and Predicate Argument Components	Binary	True	False	True	False	True	Linear SVM	C=0.25	0.810010621349	0.810010621349	0.800606741681
Words and Predicate Argument Components	Binary	True	False	True	False	True	Linear SVM	C=0.5	0.814524694636	0.814524694636	0.806411760921
Words and Predicate Argument Components	Binary	True	False	True	False	True	Linear SVM	C=0.75	0.816117896973	0.816117896973	0.808245344607
Words and Predicate Argument Components	Binary	True	False	True	False	True	Linear SVM	C=1	0.815454062666	0.815454062666	0.807832019243
Words and Predicate Argument Components	tf-idf	True	False	True	False	True	Linear SVM	C=0.1	0.834041423261	0.834041423261	0.822825606682
Words and Predicate Argument Components	tf-idf	True	False	True	False	True	Linear SVM	C=0.25	0.845724907063	0.845724907063	0.836882541038
Words and Predicate Argument Components	tf-idf	True	False	True	False	True	Linear SVM	C=0.5	0.84824747743	0.84824747743	0.840240823769
Words and Predicate Argument Components	tf-idf	True	False	True	False	True	Linear SVM	C=0.75	0.849176845459	0.849176845459	0.841501136987
Words and Predicate Argument Components	tf-idf	True	False	True	False	True	Linear SVM	C=1	0.849044078598	0.849044078598	0.84170284588
Words and Predicate Argument Components	Count	True	False	True	False	True	Linear SVM	C=0.1	0.782527881041	0.782527881041	0.770821538047
Words and Predicate Argument Components	Count	True	False	True	False	True	Linear SVM	C=0.25	0.800053106745	0.800053106745	0.790716619014
Words and Predicate Argument Components	Count	True	False	True	False	True	Linear SVM	C=0.5	0.804699946893	0.804699946893	0.795962179476
Words and Predicate Argument Components	Count	True	False	True	False	True	Linear SVM	C=0.75	0.808151885289	0.808151885289	0.799532448943
Words and Predicate Argument Components	Count	True	False	True	False	True	Linear SVM	C=1	0.808948486458	0.808948486458	0.800199282941