# SAMPLE OUTPUTS

We have documented the sample outputs for any one of the targets using all the implemented techniques.

## POS BAG OF WORDS SAMPLE OUTPUT

```
L545@cl.indiana.edu:/Users/L545/spaithan/proj $ timbl -f hillarytrain.out -t hillarytest.out -N 10000
TiMBL 6.4.2 (c) ILK 1998 - 2011.
Tilburg Memory Based Learner
Induction of Linguistic Knowledge Research Group, Tilburg University
CLiPS Computational Linguistics Group, University of Antwerp
Sun Dec 10 13:17:28 2017

Examine datafile 'hillarytrain.out' gave the following results:
Number of Features: 7838
InputFormat      : C4.5

Phase 1: Reading Datafile: hillarytrain.out
Start:          0 @ Sun Dec 10 13:17:28 2017
```

```
Tested:        1 @ Sun Dec 10 13:17:46 2017
Tested:        2 @ Sun Dec 10 13:17:46 2017
Tested:        3 @ Sun Dec 10 13:17:46 2017
Tested:        4 @ Sun Dec 10 13:17:46 2017
Tested:        5 @ Sun Dec 10 13:17:46 2017
Tested:        6 @ Sun Dec 10 13:17:47 2017
Tested:        7 @ Sun Dec 10 13:17:47 2017
Tested:        8 @ Sun Dec 10 13:17:47 2017
Tested:        9 @ Sun Dec 10 13:17:47 2017
Tested:       10 @ Sun Dec 10 13:17:47 2017
Tested:      100 @ Sun Dec 10 13:17:56 2017
Ready:       295 @ Sun Dec 10 13:18:13 2017
Seconds taken: 27.2389 (10.83 p/s)

overall accuracy:        0.579661   (171/295)
```

## TIMBL PARAMETER TUNING SAMPLE OUTPUT:

```
L545@cl.indiana.edu:/Users/L545/spaithan/proj $ timbl -f hillarytrain.out -t hillarytest.out -N 10000 -k 5
TiMBL 6.4.2 (c) ILK 1998 - 2011.
Tilburg Memory Based Learner
Induction of Linguistic Knowledge Research Group, Tilburg University
CLiPS Computational Linguistics Group, University of Antwerp
Sun Dec 10 13:23:23 2017

Examine datafile 'hillarytrain.out' gave the following results:
Number of Features: 7838
InputFormat      : C4.5

Phase 1: Reading Datafile: hillarytrain.out
Start:          0 @ Sun Dec 10 13:23:23 2017
```

```
Tested:         1 @ Sun Dec 10 13:21:27 2017
Tested:         2 @ Sun Dec 10 13:21:27 2017
Tested:         3 @ Sun Dec 10 13:21:27 2017
Tested:         4 @ Sun Dec 10 13:21:27 2017
Tested:         5 @ Sun Dec 10 13:21:27 2017
Tested:         6 @ Sun Dec 10 13:21:27 2017
Tested:         7 @ Sun Dec 10 13:21:28 2017
Tested:         8 @ Sun Dec 10 13:21:28 2017
Tested:         9 @ Sun Dec 10 13:21:28 2017
Tested:        10 @ Sun Dec 10 13:21:28 2017
Tested:       100 @ Sun Dec 10 13:21:37 2017
Ready:        295 @ Sun Dec 10 13:21:57 2017
Seconds taken: 30.3647 (9.72 p/s)

overall accuracy:        0.613559  (181/295)
There were 2 ties of which 0 (0.00%) were correctly resolved
```

## ALL WORDS AS BOW SAMPLE OUTPUT

```
L545@cl.indiana.edu:/Users/L545/spaithan/proj $ timbl -f atheism_all_train.out  -t atheism_all_test\.out  -N 50000
TiMBL 6.4.2 (c) ILK 1998 - 2011.
Tilburg Memory Based Learner
Induction of Linguistic Knowledge Research Group, Tilburg University
CLiPS Computational Linguistics Group, University of Antwerp
Sun Dec 10 13:26:13 2017

Examine datafile 'atheism_all_train.out' gave the following results:
Number of Features: 11747
InputFormat        : C4.5

Phase 1: Reading Datafile: atheism_all_train.out
Start:          0 @ Sun Dec 10 13:26:14 2017
```

```
Tested:      1 @ Sun Dec 10 13:26:36 2017
Tested:      2 @ Sun Dec 10 13:26:36 2017
Tested:      3 @ Sun Dec 10 13:26:36 2017
Tested:      4 @ Sun Dec 10 13:26:36 2017
Tested:      5 @ Sun Dec 10 13:26:36 2017
Tested:      6 @ Sun Dec 10 13:26:36 2017
Tested:      7 @ Sun Dec 10 13:26:36 2017
Tested:      8 @ Sun Dec 10 13:26:37 2017
Tested:      9 @ Sun Dec 10 13:26:37 2017
Tested:     10 @ Sun Dec 10 13:26:37 2017
Tested:    100 @ Sun Dec 10 13:26:49 2017
Ready:     220 @ Sun Dec 10 13:27:06 2017
Seconds taken: 30.0176 (7.33 p/s)

overall accuracy:          0.618182  (136/220)
```

## EXTENDING DATASET USING MPQA SUBJECTIVITY LEXICONS SAMPLE OUTPUT

```
L545@cl.indiana.edu:/Users/L545/spaithan/proj $ timbl -f feministmpqa_train.out   -t feministmpqa_test.out   -N 50000
TiMBL 6.4.2 (c) ILK 1998 - 2011.
Tilburg Memory Based Learner
Induction of Linguistic Knowledge Research Group, Tilburg University
CLiPS Computational Linguistics Group, University of Antwerp
Sun Dec 10 13:32:06 2017

Examine datafile 'feministmpqa_train.out' gave the following results:
Number of Features: 6886
InputFormat       : C4.5

Phase 1: Reading Datafile: feministmpqa_train.out
Start:           0 @ Sun Dec 10 13:32:07 2017
Warning: datafile, skipped line #40
```

```
Ready:     284 @ Sun Dec 10 13:31:49 2017
Seconds taken: 5.8555 (48.50 p/s)

overall accuracy:        0.549296  (156/284), of which 188 exact matches
There were 2 ties of which 2 (100.00%) were correctly resolved
```

## ADDING CHARACTER N-GRAMS TO POS BAG OF WORD SAMPLE OUTPUT

```
L545@cl.indiana.edu:/Users/L545/spaithan/proj $ timbl -f  legalngram_train.out   -t  legalngram_test.out  -N 90000
TiMBL 6.4.2 (c) ILK 1998 - 2011.
Tilburg Memory Based Learner
Induction of Linguistic Knowledge Research Group, Tilburg University
CLiPS Computational Linguistics Group, University of Antwerp
Sun Dec 10 13:35:45 2017

Examine datafile 'legalngram_train.out' gave the following results:
Number of Features: 74418
InputFormat      : C4.5

Phase 1: Reading Datafile: legalngram_train.out
Start:           0 @ Sun Dec 10 13:35:46 2017
```

```
Tested:          1 @ Sun Dec 10 13:39:02 2017
Tested:          2 @ Sun Dec 10 13:39:06 2017
Tested:          3 @ Sun Dec 10 13:39:09 2017
Tested:          4 @ Sun Dec 10 13:39:12 2017
Tested:          5 @ Sun Dec 10 13:39:14 2017
Tested:          6 @ Sun Dec 10 13:39:18 2017
Tested:          7 @ Sun Dec 10 13:39:21 2017
Tested:          8 @ Sun Dec 10 13:39:25 2017
Tested:          9 @ Sun Dec 10 13:39:28 2017
Tested:         10 @ Sun Dec 10 13:39:31 2017
Tested:        100 @ Sun Dec 10 13:44:25 2017
Ready:         280 @ Sun Dec 10 13:53:59 2017
Seconds taken: 898.2795 (0.31 p/s)

overall accuracy:          0.646429   (181/280)
```

## CONSTRUCTING FEATURES USING MALT PARSER SAMPLE OUTPUT

```
L545@cl.indiana.edu:/Users/L545/malt-1.5 $ java -jar -Xmx2g malt.jar -c hillary -i atheismtrain.conll -m learn -if conllx.xml
Unable to find a $JAVA_HOME at "/usr", continuing with system-provided Java...
Unable to find a $JAVA_HOME at "/usr", continuing with system-provided Java...
-----------------------------------------------------------------------
                       MaltParser 1.5
-----------------------------------------------------------------------
         MALT (Models and Algorithms for Language Technology) Group
            Vaxjo University and Uppsala University
                          Sweden
-----------------------------------------------------------------------

Started: Sun Dec 10 14:30:20 EST 2017
  Transition system    : Arc-Eager
  Parser configuration : Nivre with NORMAL root handling
  Feature model        : NivreEager.xml
  Learner              : libsvm
  Oracle               : Arc-Eager
  Data Format          : file://Users/L545/malt-1.5/hillary/conllx.xml
.                1        0s              1MB
.               10        0s              1MB
.              100        0s              1MB
..........    1000        2s              2MB
..........    2000        4s              3MB
.........     2910        6s              3MB
Creating LIBSVM model odm0.libsvm.moo
Learning time: 00:00:10 (10410 ms)
Finished: Sun Dec 10 14:30:31 EST 2017
L545@cl.indiana.edu:/Users/L545/malt-1.5 $
```

```
L545@cl.indiana.edu:/Users/L545/malt-1.5 $ java -jar -Xmx2g malt.jar -c hillary -i atheismtest.conll -m learn -if conllx.xml
Unable to find a $JAVA_HOME at "/usr", continuing with system-provided Java...
Unable to find a $JAVA_HOME at "/usr", continuing with system-provided Java...
-------------------------------------------------------------------------
                        MaltParser 1.5
-------------------------------------------------------------------------
         MALT (Models and Algorithms for Language Technology) Group
             Vaxjo University and Uppsala University
                            Sweden
-------------------------------------------------------------------------

Started: Sun Dec 10 14:30:53 EST 2017
  Transition system     : Arc-Eager
  Parser configuration  : Nivre with NORMAL root handling
  Feature model         : NivreEager.xml
  Learner               : libsvm
  Oracle                : Arc-Eager
  Data Format           : file://Users/L545/malt-1.5/hillary/conllx.xml
.               1        0s              1MB
.              10        0s              1MB
.             100        0s              1MB
.........    1000        2s              2MB
........     1956        4s              3MB
Creating LIBSVM model odm0.libsvm.moo
Learning time: 00:00:07 (7402 ms)
Finished: Sun Dec 10 14:31:01 EST 2017
L545@cl.indiana.edu:/Users/L545/malt-1.5 $
```

```
L545@cl.indiana.edu:/Users/L545/spaithan/proj $ timbl -f atheism_malt_train.out  -t atheism_malt_test.out  -N 90000 -k
TiMBL 6.4.2 (c) ILK 1998 - 2011.
Tilburg Memory Based Learner
Induction of Linguistic Knowledge Research Group, Tilburg University
CLiPS Computational Linguistics Group, University of Antwerp
Sun Dec 10 14:31:55 2017

Examine datafile 'atheism_malt_train.out' gave the following results:
Number of Features: 11747
InputFormat       : C4.5

Phase 1: Reading Datafile: atheism_malt_train.out
Start:          0 @ Sun Dec 10 14:31:56 2017
```

```
Tested:        1 @ Sun Dec 10 14:27:02 2017
Tested:        2 @ Sun Dec 10 14:27:02 2017
Tested:        3 @ Sun Dec 10 14:27:02 2017
Tested:        4 @ Sun Dec 10 14:27:02 2017
Tested:        5 @ Sun Dec 10 14:27:02 2017
Tested:        6 @ Sun Dec 10 14:27:03 2017
Tested:        7 @ Sun Dec 10 14:27:03 2017
Tested:        8 @ Sun Dec 10 14:27:03 2017
Tested:        9 @ Sun Dec 10 14:27:03 2017
Tested:       10 @ Sun Dec 10 14:27:03 2017
Tested:      100 @ Sun Dec 10 14:27:18 2017
Ready:       220 @ Sun Dec 10 14:27:38 2017
Seconds taken: 35.8088 (6.14 p/s)

overall accuracy:         0.590909  (130/220)
There were 15 ties of which 5 (33.33%) were correctly resolved
```

# SCIKIT RF WITH ALL BAG-OF-WORDS AS FEATURES SAMPLE OUTPUT

```
C:\Users\apurv\PycharmProjects\CL\venv\Scripts\python.exe C:/Users/apurv/PycharmProjects/CL/RF
Predcited labels ['AGAINST' 'AGAINST' 'AGAINST' 'AGAINST' 'NONE' 'NONE' 'FAVOR' 'AGAINST'
 'AGAINST' 'AGAINST' 'NONE' 'NONE' 'AGAINST' 'FAVOR' 'NONE' 'NONE'
 'AGAINST' 'AGAINST' 'AGAINST' 'AGAINST' 'FAVOR' 'AGAINST' 'FAVOR' 'NONE'
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 'AGAINST' 'AGAINST' 'NONE' 'AGAINST' 'FAVOR' 'AGAINST' 'AGAINST' 'AGAINST'
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 'FAVOR' 'AGAINST' 'AGAINST' 'AGAINST' 'NONE' 'NONE' 'NONE' 'AGAINST'
 'AGAINST' 'NONE' 'NONE' 'FAVOR' 'AGAINST' 'AGAINST' 'AGAINST' 'AGAINST'
 'NONE' 'FAVOR' 'AGAINST' 'AGAINST' 'FAVOR' 'AGAINST' 'AGAINST' 'AGAINST'
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 'AGAINST' 'FAVOR' 'AGAINST' 'FAVOR' 'NONE' 'AGAINST' 'AGAINST' 'AGAINST'
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 'AGAINST' 'AGAINST' 'NONE' 'AGAINST' 'AGAINST' 'AGAINST' 'AGAINST' 'NONE'
 'AGAINST' 'NONE' 'NONE' 'NONE' 'AGAINST' 'AGAINST' 'NONE' 'NONE' 'FAVOR'
 'AGAINST' 'FAVOR' 'AGAINST' 'AGAINST' 'NONE' 'AGAINST' 'AGAINST' 'AGAINST'
 'FAVOR' 'AGAINST' 'NONE' 'AGAINST' 'AGAINST' 'AGAINST' 'FAVOR' 'AGAINST'
 'AGAINST' 'AGAINST' 'NONE' 'FAVOR' 'AGAINST' 'AGAINST' 'NONE' 'AGAINST'
 'FAVOR' 'NONE' 'AGAINST' 'AGAINST' 'NONE' 'AGAINST' 'NONE' 'NONE'
 'AGAINST' 'AGAINST' 'AGAINST' 'NONE' 'AGAINST' 'AGAINST' 'NONE' 'AGAINST'
 'AGAINST' 'AGAINST' 'AGAINST' 'AGAINST' 'AGAINST' 'AGAINST' 'AGAINST'
 'AGAINST' 'FAVOR' 'AGAINST' 'NONE' 'NONE' 'FAVOR' 'AGAINST' 'NONE'
 'AGAINST' 'NONE' 'NONE' 'AGAINST' 'NONE' 'AGAINST' 'AGAINST' 'AGAINST'
 'AGAINST' 'AGAINST' 'AGAINST' 'AGAINST' 'AGAINST' 'AGAINST' 'AGAINST']
Accuracy for Atheism All Bag of words =  0.636363636364

Process finished with exit code 0
```

# SCIKIT RF WITH POS BAG-OF-WORDS AS FEATURES SAMPLE OUTPUT

```
 'FAVOR' 'FAVOR' 'NONE' 'FAVOR' 'FAVOR' 'FAVOR' 'FAVOR' 'FAVOR' 'NONE'
 'FAVOR' 'FAVOR' 'FAVOR' 'NONE' 'NONE' 'NONE' 'FAVOR' 'FAVOR' 'FAVOR'
 'NONE' 'NONE' 'NONE' 'FAVOR' 'NONE' 'FAVOR' 'FAVOR' 'FAVOR' 'FAVOR'
 'FAVOR' 'NONE' 'NONE' 'NONE' 'NONE' 'FAVOR' 'NONE' 'FAVOR' 'FAVOR' 'FAVOR'
 'FAVOR']
Accuracy for Climate change is a real concern POS bag of words =  0.609467455621

Process finished with exit code 0
```

## SCIKIT RF WITH MPQA SUBJECTIVITY LEXICONS SAMPLE OUTPUT

```
 'AGAINST' 'AGAINST' 'AGAINST' 'AGAINST' 'NONE' 'FAVOR' 'FAVOR' 'AGAINST'
 'AGAINST' 'AGAINST' 'AGAINST' 'AGAINST' 'NONE' 'NONE' 'AGAINST' 'AGAINST'
 'AGAINST' 'AGAINST' 'AGAINST' 'NONE' 'AGAINST' 'AGAINST' 'AGAINST' 'FAVOR'
 'AGAINST' 'AGAINST' 'AGAINST' 'NONE' 'AGAINST' 'FAVOR' 'AGAINST' 'AGAINST'
 'NONE' 'AGAINST' 'FAVOR' 'AGAINST' 'NONE' 'AGAINST' 'FAVOR' 'AGAINST'
 'NONE' 'AGAINST' 'NONE' 'AGAINST' 'AGAINST' 'AGAINST' 'NONE' 'AGAINST'
 'AGAINST' 'AGAINST' 'AGAINST' 'AGAINST' 'AGAINST' 'AGAINST']
Accuracy for Feminist Movement MPQA =  0.533333333333

Process finished with exit code 0
```

## SCIKIT RF WITH N GRAMS AS FEATURES SAMPLE OUTPUT

```
  'AGAINST' 'AGAINST' 'AGAINST' 'AGAINST' 'AGAINST' 'FAVOR' 'AGAINST'
  'FAVOR' 'AGAINST' 'FAVOR' 'AGAINST' 'FAVOR' 'AGAINST' 'AGAINST' 'AGAINST'
  'AGAINST' 'AGAINST' 'AGAINST' 'AGAINST' 'AGAINST' 'AGAINST' 'AGAINST'
  'AGAINST' 'AGAINST' 'NONE' 'FAVOR' 'AGAINST' 'FAVOR' 'AGAINST']
 Accuracy for Atheism N grams =  0.718181818182

 Process finished with exit code 0
```

## SCIKIT RF WITH MALT OUTPUT AS FEATURES SAMPLE OUTPUT

```
 'NONE' 'FAVOR' 'FAVOR' 'FAVOR' 'FAVOR' 'NONE' 'FAVOR' 'NONE' 'FAVOR'
 'FAVOR' 'FAVOR' 'NONE']
Accuracy for Feminist Movement Malt Parser =  0.615384615385

Process finished with exit code 0
```