# 1. Feature selection

#### 1.1 TFIDE

### cfs + greedy Low level feature selection - without startSet

```
Full result description:
=== Attribute Selection on all input data ===
Search Method:
     Greedy Stepwise (forwards).
      Start set: no attributes
      Merit of best subset found:
                                     0.013
Attribute Subset Evaluator (supervised, Class (nominal): 5191 primary emotion):
      CFS Subset Evaluator
      Including locally predictive attributes
Selected attributes:
390,770,834,1061,1499,1905,1918,2292,2833,3441,3527,4245,4469,4498,4776 : 15
                     fear
                     glad
                     joy
                     burnt.
                     love
                     sat
                     wretch
                     kill
                     learn
                     ran
                     miser
                     broom
                     afraid
                     said
                     ill
cfs + greedy Low level feature selection - with startSet
Computed start set !
4498, 2563, 76, 834, 3441, 639, 770, 1918, 1575, 4469, 1905, 2292, 1903, 2508, 390, 4776, 2439, 1
894,1098,3527,309,2833,1499,1315,1061,5111,4415,1527,446,4663,4249,2334,4245
Full result description:
=== Attribute Selection on all input data ===
Search Method:
      Greedy Stepwise (forwards).
      Start set:
```

Selected attributes: 76,309,390,446,639,770,834,1061,1098,1315,1499,1527,1575,1894,1903,1905,1918,229

Attribute Subset Evaluator (supervised, Class (nominal): 5191 primary emotion):

4498, 2563, 76, 834, 3441, 639, 770, 1918, 1575, 4469, 1905, 2292, 1903, 2508, 390, 4776, 2439, 1 894, 1098, 3527, 309, 2833, 1499, 1315, 1061, 5111, 4415, 1527, 446, 4663, 4249, 2334, 4245

Merit of best subset found: 0.016

Including locally predictive attributes

CFS Subset Evaluator

```
2,2334,2439,2508,2563,2833,3441,3527,4245,4249,4415,4469,4498,4663,4776,5111 :
33
                     wept
                     splendid
                     fear
                     flea
                     shall
                     glad
                     joy
                     burnt
                     dear
                     grief
                     love
                     wood
                     heart
                     sad
                     saw
                     sat
                     wretch
                     kill
                     dark
                     fell
                     rage
                     poor
                     learn
                     ran
                     miser
                     broom
                     shudder
                     punish
                     afraid
                     said
                     sorrow
                     ill
                     pin
cfs + bestFirst Low level feature selection - without startSet
Full result description:
=== Attribute Selection on all input data ===
Search Method:
      Best first.
      Start set: no attributes
      Search direction: forward
      Stale search after 5 node expansions
      Total number of subsets evaluated: 155267
     Merit of best subset found:
                                     0.017
Attribute Subset Evaluator (supervised, Class (nominal): 5191 primary emotion):
      CFS Subset Evaluator
      Including locally predictive attributes
Selected attributes:
76,309,390,639,770,834,1061,1315,1499,1575,1894,1905,1918,2292,2439,2508,2563,28
33,3441,3527,4245,4415,4469,4498,4776,5111 : 26
                     wept
                     splendid
                     fear
                     shall
                     glad
```

joy

burnt grief love heart sad sat. wretch kill fell rage poor learn ran miser broom punish afraid said ill pin

dear grief love wood heart sad saw

## cfs + bestFirst Low level feature selection - with startSet

```
Computed start set !
4498, 2563, 76, 834, 3441, 639, 770, 1918, 1575, 4469, 1905, 2292, 1903, 2508, 390, 4776, 2439, 1
894,1098,3527,309,2833,1499,1315,1061,5111,4415,1527,446,4663,4249,2334,4245
Full result description:
=== Attribute Selection on all input data ===
Search Method:
      Best first.
      Start set:
4498, 2563, 76, 834, 3441, 639, 770, 1918, 1575, 4469, 1905, 2292, 1903, 2508, 390, 4776, 2439, 1
894,1098,3527,309,2833,1499,1315,1061,5111,4415,1527,446,4663,4249,2334,4245
      Search direction: forward
      Stale search after 5 node expansions
      Total number of subsets evaluated: 25782
      Merit of best subset found:
                                     0.016
Attribute Subset Evaluator (supervised, Class (nominal): 5191 primary_emotion):
      CFS Subset Evaluator
      Including locally predictive attributes
Selected attributes:
76,309,390,446,639,770,834,1061,1098,1315,1499,1527,1575,1894,1903,1905,1918,229
2,2334,2439,2508,2563,2833,3441,3527,4245,4249,4415,4469,4498,4663,4776,5111 :
33
                      wept
                      splendid
                      fear
                      flea
                      shall
                      glad
                      joy
                     burnt
```

sat wretch kill dark fell rage poor learn ran miser broom shudder punish afraid said sorrow ill pin

# **1.2 LDA**

#### cfs + greedy Low level feature selection - without startSet

```
Full result description:
=== Attribute Selection on all input data ===
Search Method:
     Greedy Stepwise (forwards).
      Start set: no attributes
                                    0.009
     Merit of best subset found:
Attribute Subset Evaluator (supervised, Class (nominal): 5191 primary emotion):
     CFS Subset Evaluator
      Including locally predictive attributes
Selected attributes: 2,14,31,68,115,129,139,145 : 8
                     nurseri
                     trodden
                     jeer
                     huddl
                     abid
                     aquat
                     china
                     shift
```

### cfs + greedy Low level feature selection - with startSet

```
Computed start set !
139,31,115,14,145,129,2,68
Full result description:

=== Attribute Selection on all input data ===

Search Method:
        Greedy Stepwise (forwards).
        Start set: 139,31,115,14,145,129,2,68
        Merit of best subset found: 0.009

Attribute Subset Evaluator (supervised, Class (nominal): 5191 primary_emotion):
        CFS Subset Evaluator
```

```
Selected attributes: 2,14,31,68,115,129,139,145 : 8
                     nurseri
                     trodden
                     jeer
                     huddl
                     abid
                     aquat
                     china
                     shift
cfs + bestFirst Low level feature selection - without startSet
Full result description:
=== Attribute Selection on all input data ===
Search Method:
      Best first.
      Start set: no attributes
      Search direction: forward
      Stale search after 5 node expansions
      Total number of subsets evaluated: 67406
      Merit of best subset found:
Attribute Subset Evaluator (supervised, Class (nominal): 5191 primary emotion):
      CFS Subset Evaluator
      Including locally predictive attributes
Selected attributes: 2,14,31,68,115,129,139,145 : 8
                     nurseri
                     trodden
                     jeer
                     huddl
                     abid
                     aquat
                     china
                     shift
cfs + bestFirst Low level feature selection - with startSet
Computed start set !
139, 31, 115, 14, 145, 129, 2, 68
Full result description:
=== Attribute Selection on all input data ===
Search Method:
      Best first.
      Start set: 139,31,115,14,145,129,2,68
      Search direction: forward
      Stale search after 5 node expansions
      Total number of subsets evaluated: 25907
      Merit of best subset found:
                                   0.009
Attribute Subset Evaluator (supervised, Class (nominal): 5191 primary_emotion):
      CFS Subset Evaluator
      Including locally predictive attributes
Selected attributes: 2,14,31,68,115,129,139,145 : 8
```

Including locally predictive attributes

nurseri trodden jeer huddl abid aquat china shift