

|                                      |                           |                |                     |  |
|--------------------------------------|---------------------------|----------------|---------------------|--|
| <b>Phase 1 results</b>               |                           |                |                     |  |
| Classifier                           | Parameters                | Mean F1        |                     |  |
| KNeighborsClassifier                 | n_neighbors=1             | 0.1416768033   |                     |  |
| KNeighborsClassifier                 | n_neighbors=3             | 0.05406815     |                     |  |
| KNeighborsClassifier                 | n_neighbors=5             | 0.03204905     |                     |  |
| SVC (Best result)                    | kernel = "poly"           | 0.6404965167   |                     |  |
|                                      | degree = 1                |                |                     |  |
|                                      | gamma = .01, .1, .001     |                |                     |  |
|                                      | C = 10, 1, 100            |                |                     |  |
|                                      |                           |                |                     |  |
| <b>Phase 2 best results</b>          |                           |                |                     |  |
| Best result for KNeighborsClassifier |                           |                |                     |  |
| PCA parameters                       | svd_solver = 'full'       | whiten = False | n_components = 48   |  |
| KNeighborsClassifier par             | n_neighbors = 1           |                |                     |  |
| Mean F1                              | 0.173493245               |                |                     |  |
|                                      |                           |                |                     |  |
| Best result for SVC                  |                           |                |                     |  |
| PCA parameters                       | svd_solver = 'randomized' | whiten = False | n_components = 2181 |  |
| SVC parameters                       | kernel = 'linear'         | C = 0.1        |                     |  |
| Mean F1                              | 0.6484317038              |                |                     |  |