```
D:\Anaconda\python.exe D:/code/seq2vec/main.py
D:\Anaconda\lib\site-packages\h5py\__init__.py:36: FutureWarning: Conversion of the second argument of issubdtype from `float` to `np.floating` is deprecated. In future, it will be treated as `np.float64 == np.dtype(float).type`.
  from ._conv import register_converters as _register_converters
Using TensorFlow backend.
D:\Anaconda\lib\site-packages\tensorflow\python\framework\dtypes.py:523: FutureWarning: Passing (type, 1) or '1type' as a synonym of type is deprecated; in a future version of numpy, it will be understood as (type, (1,)) / '(1,)type'.
  _np_qint8 = np.dtype([("qint8", np.int8, 1)])
D:\Anaconda\lib\site-packages\tensorflow\python\framework\dtypes.py:524: FutureWarning: Passing (type, 1) or '1type' as a synonym of type is deprecated; in a future version of numpy, it will be understood as (type, (1,)) / '(1,)type'.
  _np_quint8 = np.dtype([("quint8", np.uint8, 1)])
D:\Anaconda\lib\site-packages\tensorflow\python\framework\dtypes.py:525: FutureWarning: Passing (type, 1) or '1type' as a synonym of type is deprecated; in a future version of numpy, it will be understood as (type, (1,)) / '(1,)type'.
  _np_qint16 = np.dtype([("qint16", np.int16, 1)])
D:\Anaconda\lib\site-packages\tensorflow\python\framework\dtypes.py:526: FutureWarning: Passing (type, 1) or '1type' as a synonym of type is deprecated; in a future version of numpy, it will be understood as (type, (1,)) / '(1,)type'.
  _np_quint16 = np.dtype([("quint16", np.uint16, 1)])
D:\Anaconda\lib\site-packages\tensorflow\python\framework\dtypes.py:527: FutureWarning: Passing (type, 1) or '1type' as a synonym of type is deprecated; in a future version of numpy, it will be understood as (type, (1,)) / '(1,)type'.
  _np_qint32 = np.dtype([("qint32", np.int32, 1)])
D:\Anaconda\lib\site-packages\tensorflow\python\framework\dtypes.py:532: FutureWarning: Passing (type, 1) or '1type' as a synonym of type is deprecated; in a future version of numpy, it will be understood as (
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15 type, (1,)) / '(1,)type'.
16   np_resource = np.dtype([("resource", np.ubyte, 1)])
17 D:\Anaconda\lib\site-packages\sklearn\ensemble\
   weight_boosting.py:29: DeprecationWarning: numpy.core.
   umath_tests is an internal NumPy module and should not
    be imported. It will be removed in a future NumPy
   release.
18   from numpy.core.umath_tests import inner1d
19 WARNING:tensorflow:From D:\Anaconda\lib\site-packages\
   keras\backend\tensorflow_backend.py:1188: calling
   reduce_sum (from tensorflow.python.ops.math_ops) with
   keep_dims is deprecated and will be removed in a
   future version.
20 Instructions for updating:
21 keep_dims is deprecated, use keepdims instead
22 WARNING:tensorflow:From D:\Anaconda\lib\site-packages\
   keras\backend\tensorflow_backend.py:1290: calling
   reduce_mean (from tensorflow.python.ops.math_ops) with
    keep_dims is deprecated and will be removed in a
   future version.
23 Instructions for updating:
24 keep_dims is deprecated, use keepdims instead
25 RPI1807 data
26 fold  0
27 SVM
28 0.9568567026194145 0.946524064171123 0.
   9779005524861878 0.9303135888501742 0.9128120097668994
29 ----------------------------------------------------
   ----------------------------------------------------
   ----------------------------------------
30 AdaBoost
31 0.9445300462249615 0.9478021978021978 0.
   9530386740331491 0.9337979094076655 0.8874945851109061
32 ----------------------------------------------------
   ----------------------------------------------------
   ----------------------------------------
33 Random forest
34 0.9707241910631741 0.9724517906336089 0.
   9751381215469613 0.9651567944250871 0.9406390246038757
35 ----------------------------------------------------
   ----------------------------------------------------
   ----------------------------------------
36 fold  1
```

```
37 SVM
38 0.9537750385208013 0.9486486486486486 0.
   9696132596685083 0.9337979094076655 0.9063119899976015
39 ----------------------------------------------------
   ----------------------------------------------------
   ----------------------------------------
40 AdaBoost
41 0.9506933744221879 0.953296703296703 0.
   9585635359116023 0.9407665505226481 0.8999973578457896
42 ----------------------------------------------------
   ----------------------------------------------------
   ----------------------------------------
43 Random forest
44 0.9722650231124808 0.9751381215469613 0.
   9751381215469613 0.9686411149825784 0.9437792365295398
45 ----------------------------------------------------
   ----------------------------------------------------
   ----------------------------------------
46 fold  2
47 SVM
48 0.9553158705701078 0.9414893617021277 0.
   9806094182825484 0.9236111111111112 0.910015861003242
49 ----------------------------------------------------
   ----------------------------------------------------
   ----------------------------------------
50 AdaBoost
51 0.9460708782742681 0.9502762430939227 0.
   9529085872576177 0.9375 0.8907256339918661
52 ----------------------------------------------------
   ----------------------------------------------------
   ----------------------------------------
53 Random forest
54 0.9722650231124808 0.9673024523160763 0.
   9833795013850416 0.9583333333333334 0.943866882091287
55 ----------------------------------------------------
   ----------------------------------------------------
   ----------------------------------------
56 fold  3
57 SVM
58 0.9506172839506173 0.9506849315068493 0.
   961218836565097 0.9372822299651568 0.8998569935723386
59 ----------------------------------------------------
   ----------------------------------------------------
```

```
59 ----------------------------------------
60 AdaBoost
61 0.9444444444444444 0.9452054794520548 0.
   9556786703601108 0.9303135888501742 0.
   8873293092240155
62 ------------------------------------------------------
   ------------------------------------------------------
   ------------------------------------------
63 Random forest
64 0.9753086419753086 0.9726027397260274 0.
   9833795013850416 0.9651567944250871 0.
   9499677309656313
65 ------------------------------------------------------
   ------------------------------------------------------
   ------------------------------------------
66 fold  4
67 SVM
68 0.9614197530864198 0.9540540540540541 0.
   9778393351800554 0.9407665505226481 0.
   9219354465393653
69 ------------------------------------------------------
   ------------------------------------------------------
   ------------------------------------------
70 AdaBoost
71 0.9490740740740741 0.9606741573033708 0.
   9473684210526315 0.9512195121951219 0.
   8970955594338563
72 ------------------------------------------------------
   ------------------------------------------------------
   ------------------------------------------
73 Random forest
74 0.9783950617283951 0.9727520435967303 0.
   9889196675900277 0.9651567944250871 0.
   9562942374453077
75 ------------------------------------------------------
   ------------------------------------------------------
   ------------------------------------------
76 mean performance of svm using kmer feature
77 [0.95559693 0.94828021 0.97343628 0.93315428 0.
   91018646]
78 ------------------------------------------------------
   ------------------------------------------------------
   ------------------------------------------
```

```
mean performance of AdaBoost using kmer feature
<module 'numpy' from 'D:\\Anaconda\\lib\\site-packages\\numpy\\__init__.py'> [0.94696256 0.95145096 0.95351158 0.93871951 0.89252849]
------------------------------------------------------------------------------------------------------------------------
mean performance of Random forest using kmer feature
[0.97379159 0.97204943 0.98119098 0.96448897 0.94690942]
------------------------------------------------------------------------------------------------------------------------

Process finished with exit code 0

```