```
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 fold  0
26 SVM
27 0.7567567567567568 0.7209302325581395 0.
   8378378378378378 0.6756756756756757 0.520401483881538
28 ----------------------------------------------------
   ----------------------------------------------------
   ----------------------------------------
29 AdaBoost
30 0.7027027027027027 0.6973684210526315 0.
   7162162162162162 0.6891891891891891 0.4055535528269063
31 ----------------------------------------------------
   ----------------------------------------------------
   ----------------------------------------
32 Random forest
33 0.75 0.7402597402597403 0.7702702702702703 0.
   7297297297297297 0.5004113910281371
34 ----------------------------------------------------
   ----------------------------------------------------
   ----------------------------------------
35 fold  1
36 SVM
```

```
37 0.7567567567567568 0.7111111111111111 0.
   8648648648648649 0.6486486486486487 0.5259547057403531
38 ------------------------------------------------------
   ------------------------------------------------------
   ----------------------------------------
39 AdaBoost
40 0.6891891891891891 0.6794871794871795 0.
   7162162162162162 0.6621621621621622 0.
   37893237337253677
41 ------------------------------------------------------
   ------------------------------------------------------
   ----------------------------------------
42 Random forest
43 0.722972972972973 0.6896551724137931 0.
   8108108108108109 0.6351351351351351 0.4529908148620123
44 ------------------------------------------------------
   ------------------------------------------------------
   ----------------------------------------
45 fold  2
46 SVM
47 0.7297297297297297 0.6931818181818182 0.
   8243243243243243 0.6351351351351351 0.
   46790960017870326
48 ------------------------------------------------------
   ------------------------------------------------------
   ----------------------------------------
49 AdaBoost
50 0.7297297297297297 0.7297297297297297 0.
   7297297297297297 0.7297297297297297 0.4594594594594595
51 ------------------------------------------------------
   ------------------------------------------------------
   ----------------------------------------
52 Random forest
53 0.6959459459459459 0.7101449275362319 0.
   6621621621621622 0.7297297297297297 0.
   39278953357342467
54 ------------------------------------------------------
   ------------------------------------------------------
   ----------------------------------------
55 fold  3
56 SVM
57 0.7210884353741497 0.6987951807228916 0.
   7837837837837838 0.6575342465753424 0.4450409028294979
```

```
58 ------------------------------------------------
   ------------------------------------------------
   ------------------------------------------
59 AdaBoost
60 0.6666666666666666 0.6712328767123288 0.
   6621621621621622 0.6712328767123288 0.
   33339503887449096
61 ------------------------------------------------
   ------------------------------------------------
   ------------------------------------------
62 Random forest
63 0.7210884353741497 0.7088607594936709 0.
   7567567567567568 0.684931506849315 0.4429198533103445
64 ------------------------------------------------
   ------------------------------------------------
   ------------------------------------------
65 fold  4
66 SVM
67 0.7687074829931972 0.7241379310344828 0.
   863013698630137 0.6756756756756757 0.5479998600326182
68 ------------------------------------------------
   ------------------------------------------------
   ------------------------------------------
69 AdaBoost
70 0.7006802721088435 0.6986301369863014 0.
   6986301369863014 0.7027027027027027 0.
   4013328396890041
71 ------------------------------------------------
   ------------------------------------------------
   ------------------------------------------
72 Random forest
73 0.7210884353741497 0.7051282051282052 0.
   7534246575342466 0.6891891891891891 0.
   44343548070835176
74 ------------------------------------------------
   ------------------------------------------------
   ------------------------------------------
75 mean performance of svm using kmer feature
76 [0.74660783 0.70963125 0.8347649  0.65853388 0.
   50146131]
77 ------------------------------------------------
   ------------------------------------------------
   ------------------------------------------
```

```
mean performance of AdaBoost using kmer feature
<module 'numpy' from 'D:\\Anaconda\\lib\\site-packages\\numpy\\__init__.py'> [0.69779371 0.69528967
 0.70459089 0.69100333 0.39573465]
--------------------------------------------------------------------------------------------------
mean performance of Random forest using kmer feature
[0.72221916 0.71080976 0.75068493 0.69374306 0.44650941]
--------------------------------------------------------------------------------------------------


Process finished with exit code 0

```