

Bambang Priyanto (001202100111)  
Artificial intelligence

## collaborative\_filtering

```
PROBLEMS OUTPUT DEBUG CONSOLE TERMINAL

• bengsky@bengsky:~/S5/AI/py/Chapter08$ python3 collaborative_filtering.py --user "David Smith"

Users similar to David Smith:

User                      Similarity score
-----
Chris Duncan              1.0
Bill Duffy                0.99
Adam Cohen                0.91
• bengsky@bengsky:~/S5/AI/py/Chapter08$
```

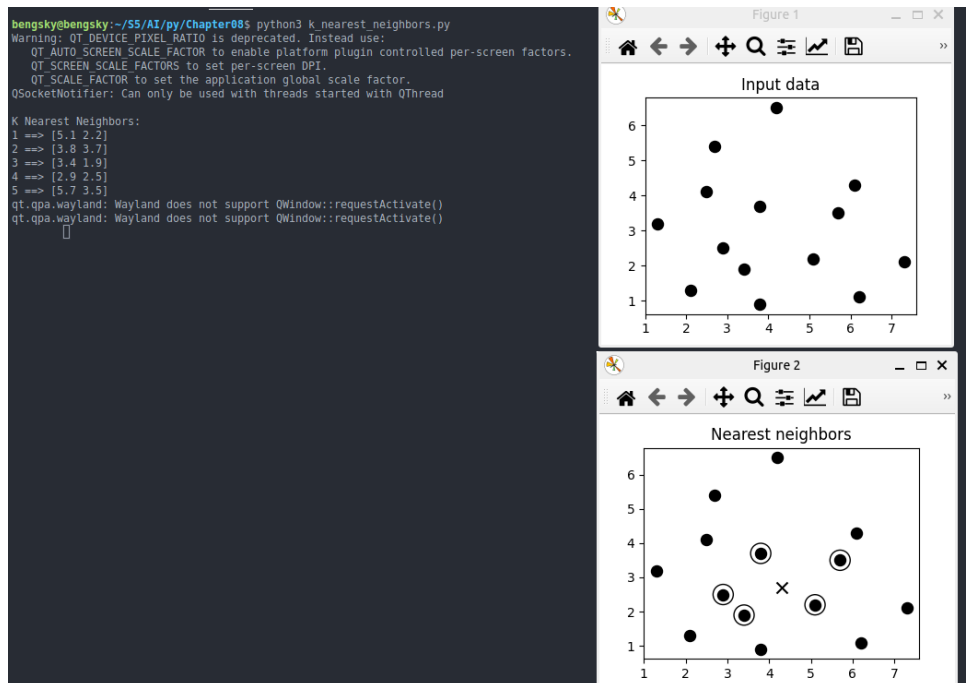
## Compute\_score

```
• bengsky@bengsky:~/S5/AI/py/Chapter08$ python3 compute_scores.py --user1 "David Smith" --user2 "Brenda Peterson" --score-type Pearson

Pearson score:
-0.7236759610155113
• bengsky@bengsky:~/S5/AI/py/Chapter08$ python3 compute_scores.py --user1 "David Smith" --user2 "Brenda Peterson" --score-type Euclidean

Euclidean score:
0.1424339656566283
• bengsky@bengsky:~/S5/AI/py/Chapter08$
```

## K\_nearest\_neighbor



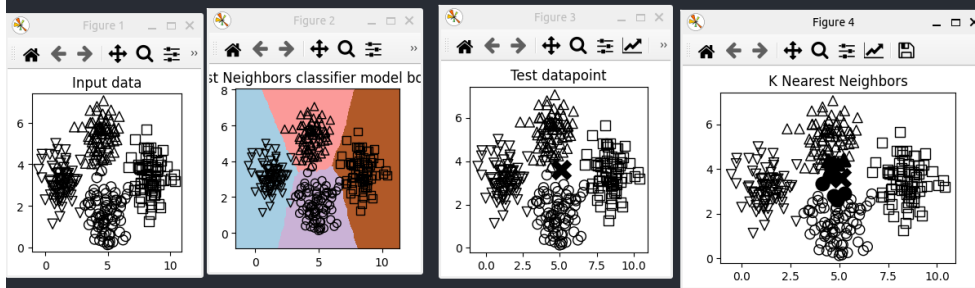
## Movie\_recomender

```
bengsky@bengsky:~/S5/AI/py/Chapter08$ python3 movie_recommender.py --user "David Smith"

Movie recommendations for David Smith:
1. Roman Holiday
bengsky@bengsky:~/S5/AI/py/Chapter08$
```

## Nearest\_neighbor\_classifier

```
bengsky@bengsky:~/S5/AI/py/Chapter08$ python3 nearest_neighbors_classifier.py
/home/bengsky/S5/AI/py/Chapter08/nearest_neighbors_classifier.py:9: DeprecationWarning: 'np.int' is a deprecated alias for the builtin 'int'. To silence this warning, use 'int' by itself. Doing this will not modify a
ny behavior and is safe. When replacing 'np.int', you may wish to use e.g. 'np.int64' or 'np.int32' to specify the precision. If you wish to review your current use, check the release note link for additional informa
tion.
Deprecated in NumPy 1.20; for more details and guidance: https://numpy.org/devdocs/release/1.20.0-notes.html#deprecations
  X, y = data[:, :-1], data[:, -1].astype(np.int)
Warning: QT_DEVICE_PIXEL_RATIO is deprecated. Instead use:
  QT_AUTO_SCREEN_SCALE_FACTOR to enable platform plugin controlled per-screen factors.
  QT_SCREEN_SCALE_FACTORS to set per-screen DPI.
  QT_SCALE_FACTOR to set the application global scale factor.
QObjectNotifier: Can only be used with threads started with QThread
/home/bengsky/S5/AI/py/Chapter08/nearest_neighbors_classifier.py:68: DeprecationWarning: 'np.int' is a deprecated alias for the builtin 'int'. To silence this warning, use 'int' by itself. Doing this will not modify
any behavior and is safe. When replacing 'np.int', you may wish to use e.g. 'np.int64' or 'np.int32' to specify the precision. If you wish to review your current use, check the release note link for additional inform
ation.
Deprecated in NumPy 1.20; for more details and guidance: https://numpy.org/devdocs/release/1.20.0-notes.html#deprecations
  indices = indices.astype(np.int)[0]
Predicted output: 1
qt.qpa.wayland: Wayland does not support QWindow::requestActivate()
qt.qpa.wayland: Wayland does not support QWindow::requestActivate()
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[]
```



## pipeline\_trainer

```
bengsky@bengsky:~/S5/AI/py/Chapter08$ python3 pipeline_trainer.py

Predicted output:
[0 2 2 0 2 0 2 1 0 1 1 2 0 0 2 2 1 0 0 1 0 2 1 0 2 2 0 0 1 2 0 0 1 0 2 2 1
 1 2 2 2 0 1 0 2 1 1 2 1 0 1 2 2 1 2 0 2 2 0 2 2 0 1 0 2 1 0 1 1 2 0 1 0 2
 0 0 1 2 2 0 0 2 2 2 0 0 0 0 2 2 2 1 2 0 2 0 2 2 1 0 1 1 1 1 2 2 0 2 0 1 1
 0 2 1 0 0 0 1 1 1 0 0 0 1 2 0 0 0 2 1 2 0 0 1 0 1 1 0 1 1 1 2 2 0 1 1 2 0
 2 2]

Score: 0.86

Indices of selected features: 4, 7, 8, 12, 14, 17, 22
bengsky@bengsky:~/S5/AI/py/Chapter08$
```