

## K-means Report

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### Source code

<https://gist.github.com/kimlin20011/98e30c6f7167f29562668676212e65fa>

Shuffle 5 time to check the accracy.

```
(base) liniunande-MacBook-Air:homework liniunans$ python kmeans.py
y_test_pre:
[1 1 1 0 0 1 0 1 0 1 1 1 1 1 0 1 1 0 0 1 1 1 1 1 0 1 0 1 1 1]
y_test:
[1 2 2 0 0 1 0 2 0 1 2 2 1 2 0 1 1 0 0 2 2 1 2 2 0 1 0 1 1 1]
the accuracy is 0.6666666666666666
(base) liniunande-MacBook-Air:homework liniunans$
```

```
y_test_pre:
[0 1 1 1 1 1 1 0 1 1 1 0 0 1 1 1 1 0 0 1 1 1 0 1 1 0 0 0 1 0]
y_test:
[0 2 2 1 2 2 2 0 1 2 1 0 0 2 2 1 1 0 0 2 1 2 0 1 2 0 0 0 1 0]
the accuracy is 0.6333333333333333
```

```
y_test_pre:
[1 0 0 0 1 1 1 1 0 1 1 1 1 1 0 1 0 1 1 1 1 1 1 1 1 1 0 1 1 1]
y_test:
[2 0 0 0 1 2 1 2 0 2 1 2 1 1 0 1 0 2 2 2 1 2 1 1 2 0 1 1 1 1]
the accuracy is 0.6666666666666666
```

```
(base) liniunande-MacBook-Air:homework liniunans$ python kmeans.py
y_test_pre:
[1 0 1 0 0 1 0 1 0 1 1 0 0 1 1 1 1 0 0 1 1 0 1 0 0 0 0 1 1 1]
y_test:
[1 0 2 0 1 1 0 2 0 2 1 0 1 2 1 2 2 0 0 2 2 0 1 0 0 0 0 2 1 2]
the accuracy is 0.6
```

```
y_test_pre:
[0 1 0 0 1 0 0 0 0 1 0 1 1 1 1 1 1 1 0 1 1 1 0 1 1 0 1 1 1]
y_test:
[0 1 0 0 1 0 0 0 0 1 1 2 1 1 2 2 2 2 2 0 1 1 1 0 2 2 0 1 2 2]
the accuracy is 0.6333333333333333
```