

```
(dataml100) C:\Users\Topsu\PycharmProjects\PRML\week4> python bayes_cifar10.py
0/50000 of training images resized.
10000/50000 of training images resized.
20000/50000 of training images resized.
30000/50000 of training images resized.
40000/50000 of training images resized.
Time elapsed: 23.6921715 seconds

0/10000 of test images classified.
1000/10000 of test images classified.
2000/10000 of test images classified.
3000/10000 of test images classified.
4000/10000 of test images classified.
5000/10000 of test images classified.
6000/10000 of test images classified.
7000/10000 of test images classified.
8000/10000 of test images classified.
9000/10000 of test images classified.
Time elapsed: 22.9162708 seconds

Prediction accuracy (NaiveBayes) is: 0.1952

0/10000 of test images classified.
1000/10000 of test images classified.
2000/10000 of test images classified.
3000/10000 of test images classified.
4000/10000 of test images classified.
5000/10000 of test images classified.
6000/10000 of test images classified.
7000/10000 of test images classified.
8000/10000 of test images classified.
9000/10000 of test images classified.
Time elapsed: 13.3052536 seconds

Prediction accuracy (Bayes) is: 0.247

(dataml100) C:\Users\Topsu\PycharmProjects\PRML\week4>
```

The prediction accuracy is better in Bayesian classification than in naïve Bayesian classification. This is most likely due to the reason that different colour channels correlate with each other, meaning we get better classification if we take this into account.