Results

<u>For PA algorithm</u>

```
>> Iterations =  1
Algorithm = PA
Weights =

  -0.17147    0.51471    0.24934    0.13220   -0.69733    0.30281   -0.29870    0.14663   -0.41348

Training_accuracy =  82.833
Testing_accuracy =  93.133

Iterations =  2
Algorithm = PA
Weights =

  -0.17618    0.62660    0.26666    0.16007   -0.80992    0.32285   -0.34787    0.12432   -0.45706

Training_accuracy =  82.833
Testing_accuracy =  93.133

Iterations =  10
Algorithm = PA
Weights =

  -0.19051    0.70578    0.28235    0.18071   -0.89541    0.34585   -0.38363    0.11809   -0.49238

Training_accuracy =  82.618
Testing_accuracy =  93.562
```

<u>For PA – I algorithm</u>

```
Iterations =  1
Algorithm = PA - I
Weights =

  -0.17147    0.51471    0.24934    0.13220   -0.69733    0.30281   -0.29870    0.14663   -0.41348

Training_accuracy =  82.833
Testing_accuracy =  93.133

Iterations =  2
Algorithm = PA - I
Weights =

  -0.17618    0.62660    0.26666    0.16007   -0.80992    0.32285   -0.34787    0.12432   -0.45706

Training_accuracy =  82.833
Testing_accuracy =  93.133

Iterations =  10
Algorithm = PA - I
Weights =

  -0.19051    0.70578    0.28235    0.18071   -0.89541    0.34585   -0.38363    0.11809   -0.49238

Training_accuracy =  82.618
Testing_accuracy =  93.562
```

For PA – II algorithm

```
Iterations =  1
Algorithm = PA - II
Weights =

  -0.17094   0.50818   0.24693   0.12849  -0.68803   0.30294  -0.29811   0.14871  -0.40915

Training_accuracy =  82.618
Testing_accuracy =  93.562

Iterations =  2
Algorithm = PA - II
Weights =

  -0.17574   0.61987   0.26343   0.15680  -0.79945   0.32286  -0.34643   0.12577  -0.45262

Training_accuracy =  82.833
Testing_accuracy =  93.133

Iterations =  10
Algorithm = PA - II
Weights =

  -0.18912   0.69795   0.27792   0.17713  -0.88289   0.34499  -0.38118   0.11852  -0.48561

Training_accuracy =  82.618
Testing_accuracy =  93.562
```

Conclusion

By comparing the outcomes we can see that the weights obtained by PA and PA – II algorithms are very similar but weights obtained by PA – II algorithm are different from the other two algorithms.

Results from PA and PA-I algorithms are very similar. By the PA-II algorithm for one iteration the values differ from PA and PA- I algorithms for similar one iteration. For other number of iterations the values are similar.

The highest Training accuracy is 82.833 which is found for one iteration and two iterations by PA and PA – I algorithms and also for one iteration by PA – II algorithm. The highest testing accuracy is 93.562 which is found in ten iterations by PA and PA – II algorithms and also in one iteration and ten iterations by PA-II algorithm.

We can also conclude that after ten iterations even though the number of iterations increases, the Training accuracy and the Testing accuracy are similar.