

Recommendation System Using Deep Learning

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Recommendation System using NLP and Deep Learning

1 What is the Input and Output ?

Input :

Observations on items available on the system .

Output :

Top N Recommended Items that has more positive observations .

```
Items Available : [(1, 'CD', 'likes : 2 , dislikes : 0'), (2, 'DVD', 'likes : 3 , dislikes : 0'), (3, 'Flash Card', 'likes : 1 , dislikes : 1')]
*****
Choose One Item ID To Comment On , IDs : [1, 2, 3]
ID : 1
Enter Comment :
*****
this is the best product
Processing Comment .....
this is the best product : IS POSITIVE
Our Top 2 Items are : ['CD']
*****
```

Figure 1: Input and Output

2 Motivation

Why do this ?

Recommendation system deals with traditional rating hits (likes/dislikes) which may lose some chance to give feedback in details on proposed items .

3 Related work

- What has been done ?

Most Recommendation systems implemented far from neural network algorithms NLP Classification Implemented using traditional machine learning algorithms like naïve Bayes for sentiment analysis

- What are the problems?

Both technologies needs to be merged to generate beautiful recommendation system depending on deep learning for sentiment analysis

4 Algorithm

- What did you try?

A simple try we done just combines both algorithms recommendation system plus deep learning classification .

- Why you choose to try this?

Supplement NLP classification using deep neural network

5 Result

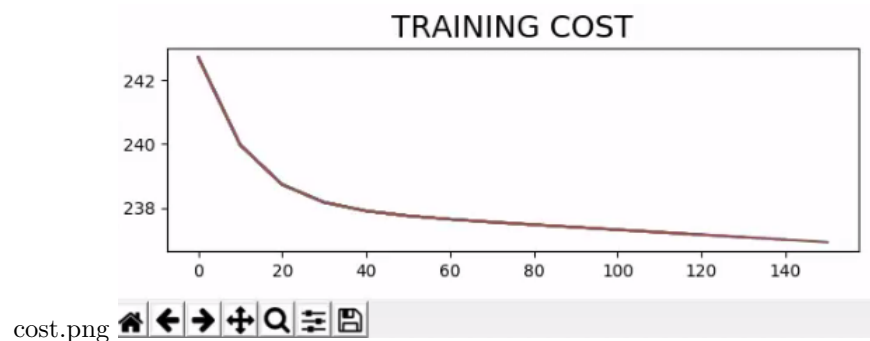


Figure 2: Cost Minimization

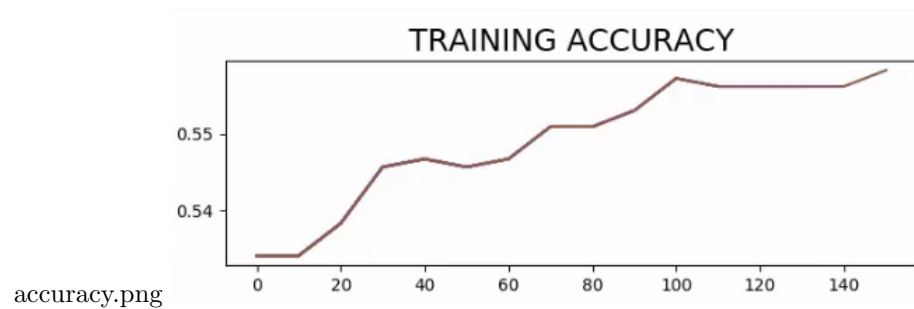


Figure 3: Accuracy Maximization

6 Evaluation

- Does it work?

Actually it worked like a charm

- How well it works?

Unluckily , there are some amount of error

7 Analysis

- doesn't work?

Due to some limitation of training process we got some misclassified observations.

- Can we make it better? How?

Yes , by increasing processing unit (Hardware like CPU or GPU) and more training data sets

8 Contribution division

- * Team Cooperation *

References

<https://pythonprogramming.net/>