**Lab Assignment 2**

**I. Introduction:**

In this Lab Assignment I tried to implement a Convolutional Neural Networks with the help of a new dataset called stsa data for text classification where data is divided into test and train sets which are placed in variables train and dev variables.

I have also changed some of the Hyperparameters and training parameters to see the new output.

**II. Objectives:**

To run text classification using CNN with new dataset and show the new graphs and scalars.

**III. Approaches/Methods:**

1. I have split the data into test and training sets.
2. Training of CNN is done by finding the vocabulary of the given data and splitting data using it using “,” separator.
3. The Gradient descent and Adam Optimizer to optimize data, developed Train and Dev summaries and checkpoints are created to see accuracy of the data.
4. The vocabulary is developed and stored in a file using “tf.SummaryWriter”.
5. The batches of trained model are applied on Dev data.
6. Below are the screenshots of the scalars and graphs

**IV. Workflow:**

1. The screenshot shows the work flow of the program:

The events are written to “./runs/1510891489” which is the new timestamp created.

1. **Scalars output:**

A screenshot of a computer

Description generated with very high confidence

1. **Graphs output:**

A screenshot of a computer

Description generated with very high confidence

1. **Embedding and Loss output:**

A screenshot of a computer

Description generated with very high confidence

1. **Histograms Output**

A screenshot of a social media post

Description generated with very high confidence

**V. DataSets:**

The data sets used are stsa.binary.test.txt and stsa.binary.train.txt files which are used for text classification of word2vec files

**VI. Parameters:**

Parameters used are batch size, number of epochs, checkpoints\_every and number of checkpoints

**VII. Evaluation and Discussion:**

I have created this project with new dataset with accuracy 0f 0.5 after running “eval.py”.

**VIII. Conclusion:**

Gradient Descent is used in CNN for layered data classification which helps in giving a better accuracy.