ASSIGNMENT 3

Introduction

In this assignment we have to we have to make text classification using three different models

- CNN
- RNN
- LSTM

And make there comparison how well they are performing.

CNN

CNN where the breakthrough product in image processing. but now a day we are applying it on NLP (Natural Language Processing) also and are able to get interesting results.

RNN

RECURRENT NEURAL NETWORKS are popular for there great result with NLP(Natural Language Processing).RNN make use of sequential information in the text.

LSTM

LSTM can be consider a special form of recurrent neural network.

Objective

In this assignment we have to we have to make text classification using three different models

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And make there comparison how well they are performing.

Methods

we will use data helper class to load data in our model to train it.

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RNN

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LSTM

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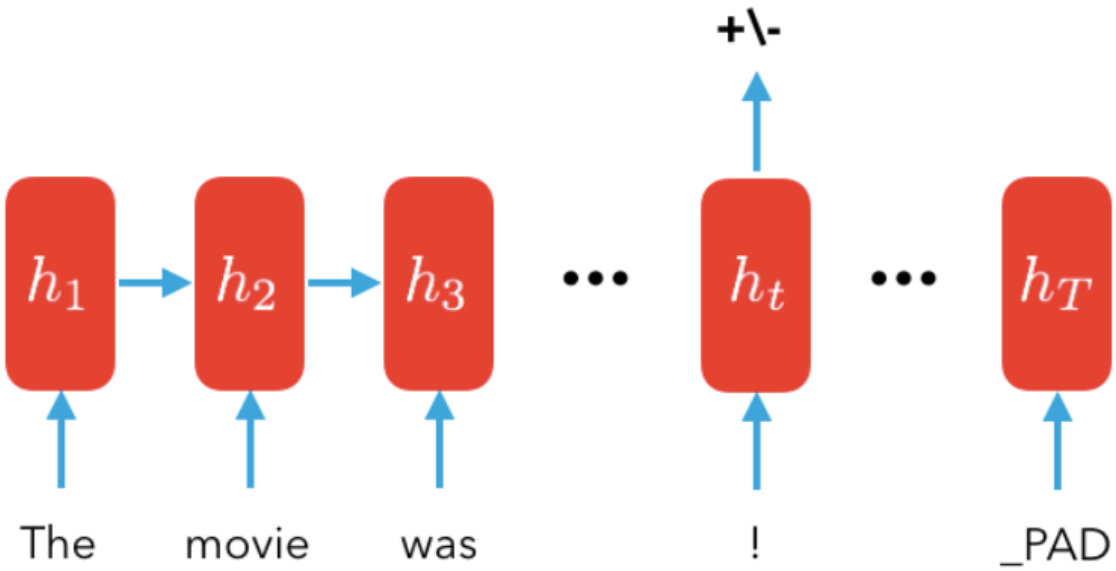
Workflow

1. Clean sentence and sperate it into tokens.
2. Converting token into numeric token.
3. Sequence length will be stored.



Datasets

In this assignment I have used 5 different class to classify text they are as follow…..

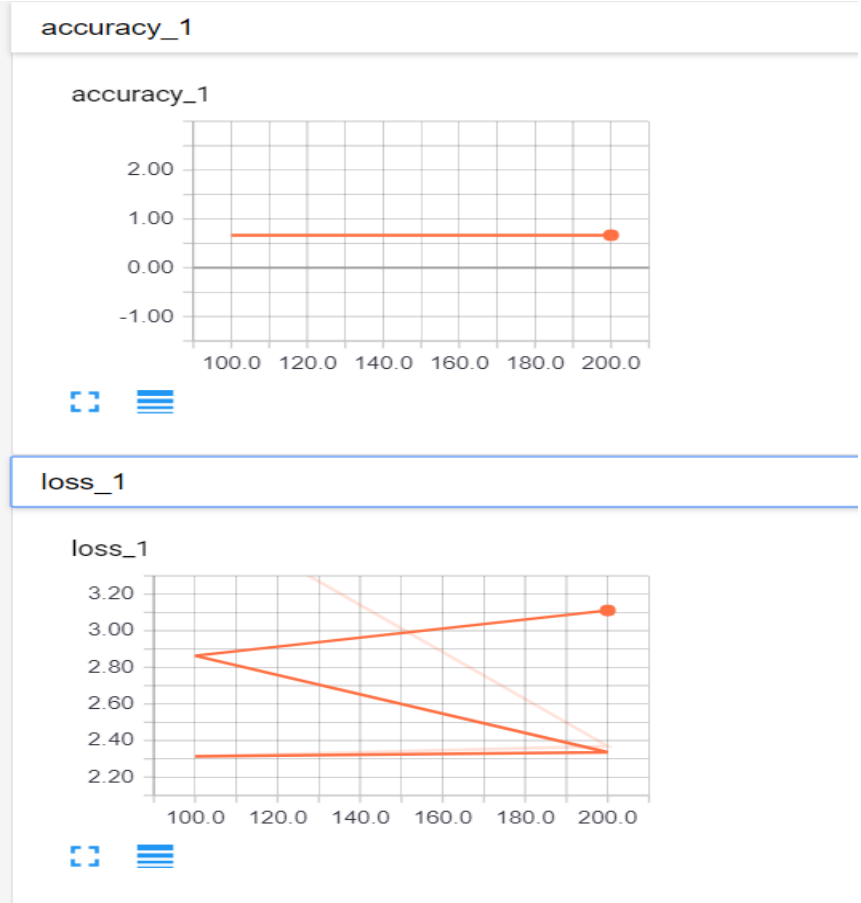
- Art
- Politics
- Sports
- Tech
- Travel

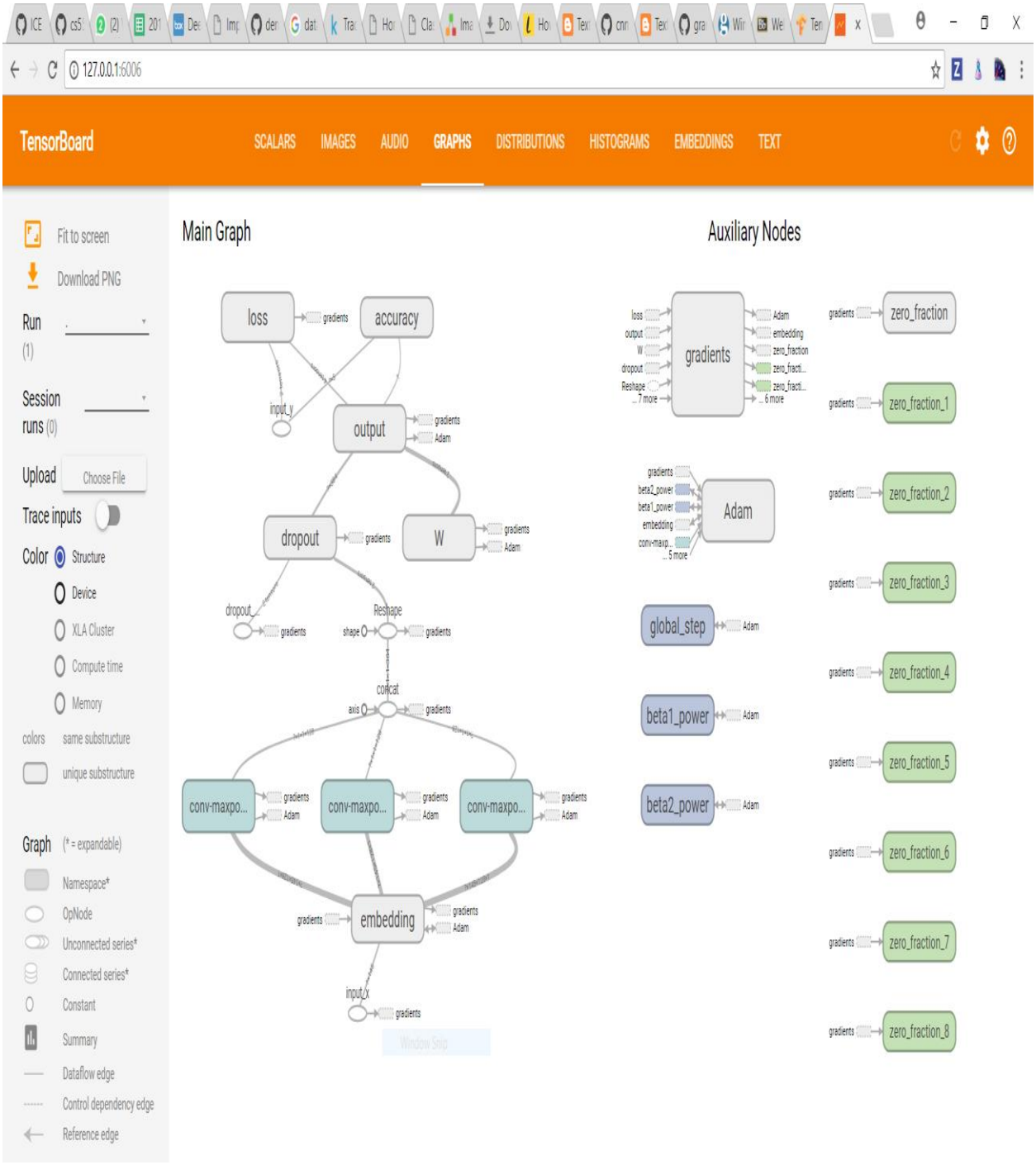
Khaka Sr's crime had been to take part in demonstrations against the communist central government i
"As his son, the story is something that touches me very deeply - it is really, really in my heart,
"He was a proud Kosovarian and he thought they had a right to exist. He was standing up for their r
To understand Xhaka is to understand his family; how they have suffered, how they have pulled toget
His guiding principles are loyalty and respect. When he commits to something or someone, he does so
"One of the most revealing details about my parents is that they only got together three months bef
"One of the strange things is we don't know why my dad was released early from his sentence but he

Salvador Dali's Mae West Lips sofa, one of the most famous pieces of furniture of the 20th century,
The British government has placed a temporary export bar on Sofa, which Dali created with Surrealis
A buyer will have to be found before May to match the asking price of £480,281 plus £16,600 VAT for
The 1938 piece of furniture has been described as the most famous object in the history of Surreali
Five of the sofas were made in total, with the version on sale altered by James, with the lips elon
The temporary export bar follows a recommendation by the reviewing committee on the export of works

Evaluation

As I am using less no. of data in data set. My model accuracy will be not good.




127.0.0.1:6006
TensorBoard
SCALARS
IMAGES
AUDIO
GRAPHS
DISTRIBUTIONS
HISTOGRAMS
EMBEDDINGS
TEXT
Fit to screen
Download PNG
Run (1)
Session runs (0)
Upload
Choose File
Trace inputs
Color
Structure
Device
XLA Cluster
Compute time
Memory
colors
same substructure
unique substructure
Graph (* = expandable)
Namespace*
OpNode
Unconnected series*
Connected series*
Constant
Summary
Dataflow edge
Control dependency edge
Reference edge
Main Graph
Auxiliary Nodes
loss
accuracy
input_y
output
dropout
W
Reshape
concat
conv-maxpo...
embedding
input_x
gradients
Adam
global_step
beta1_power
beta2_power
zero_fraction
zero_fraction_1
zero_fraction_2
zero_fraction_3
zero_fraction_4
zero_fraction_5
zero_fraction_6
zero_fraction_7
zero_fraction_8

Conclusion

RNN,CNN and LSTM all model are good in processing NPL.But at the end it will depend on the use. How big is your dataset. RNN work great with natural approach. CNN is mostly used for image classification but they are also providing good results.

In light of the perception, the intricacy of convolutional neural system doesn't appear to enhance execution, at any rate utilizing this little dataset. We may have the capacity to see execution change utilizing bigger dataset, which I won't have the capacity to confirm here. One perception I have is permitting the installing layer preparing or not does fundamentally affect the execution, same did pretrained Google Glove word vectors. In the two cases, I can see execution enhanced from 82% to 90%.