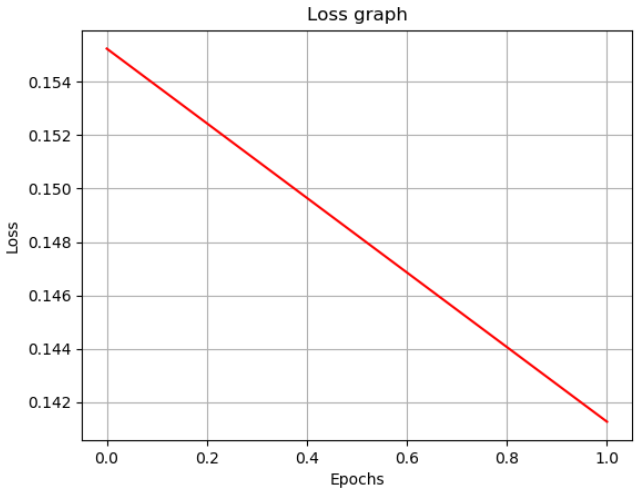
Assignment 2 – Window-based Tagging

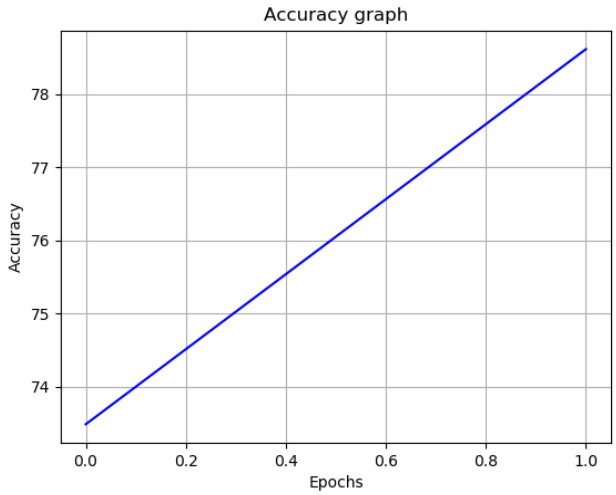
Omer Zucker 200876548
Omer Wolf 307965988

Part 3 - Adding the external word embeddings to the tagger

Ner parameters:

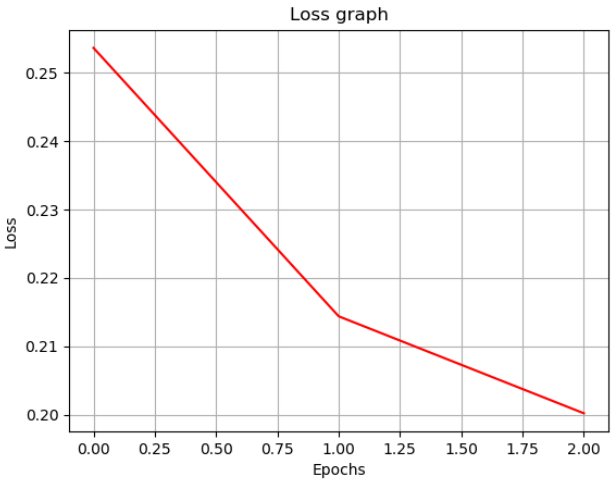
- Learning rate: 0.005
- Epochs: 2
- Hidden dim: 110
- Batch size: 1024
- Accuracy: 78.616%
- Loss: 0.141

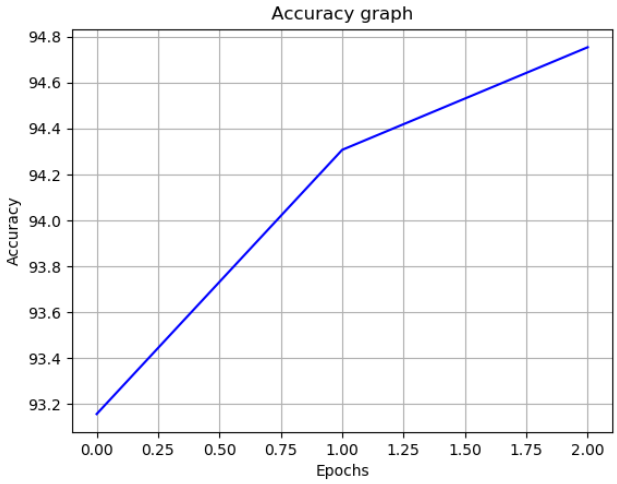




Pos parameters:

- Learning rate: 0.001
- Epochs: 3
- Hidden dim: 120
- Batch size: 1024
- Accuracy: 94.755%
- Loss: 0.200





Assignment 2 – Window-based Tagging

Omer Zucker 200876548
Omer Wolf 307965988

Question: What to do with words that appear in the training file but not the embeddings file?

Answer: If the word will appears in the training file and not in the embeddings file I will link it to 'UNK' symbol and return its index, so I will treat 'UNK' as a word in the embeddings data set.

Question: What to do with the embedding vocabulary being lower-case?

Answer: For each word I will check both for upper case and lower case. If one of them placed inside my train set (WORDS in my code) I will return its index by W2I dictionary. For the lower case I will call .lower() function in order to find the word. Otherwise, I will link the word to UNK symbol and return its index.

Question: Did accuracy improve over the tagger without the pre-trained embeddings? By how much?

Answer: For Ner parameters the accuracy of Task 1 was higher by approximately 0.5%

For Pos parameters the accuracy of Task 3 was higher by approximately 0.04%

Task 1 –

Ner parameters:

- Learning rate: 0.05
- Epochs: 2
- Hidden dim: 120
- Batch size: 1024
- Accuracy: 79.178%
- Loss: 0.169

Pos parameters:

- Learning rate: 0.005
- Epochs: 3
- Hidden dim: 110
- Batch size: 1024
- Accuracy: 94.715%
- Loss: 0.199

Task 3 –

Ner parameters:

- Learning rate: 0.005
- Epochs: 2
- Hidden dim: 110
- Batch size: 1024
- Accuracy: 78.616%
- Loss: 0.141

Pos parameters:

- Learning rate: 0.001
- Epochs: 3
- Hidden dim: 120
- Batch size: 1024
- Accuracy: 94.755%
- Loss: 0.200