

DeepLearning_Lesson3: Word Embedding

Please don't forget to submit your feedback after the class. This helps a lot in increasing effectiveness of the course.

Use the following link to submit your feedback:

https://docs.google.com/forms/d/e/1FAIpQLSf95923cdvpyChdUSsApPcX9dAhT55hLKpKfepP-y_7S6f0xQ/viewform

Lesson Overview:

In this lesson, we are going to discuss types of ANNs and Recurrent Neural Network.

Use Case Description:

1. Sentiment Analysis on the imdb dataset

Source Code:

<https://umkc.box.com/s/3so2s3dx7cjp4hwnurjx6t3it161ptey>

In class programming:

1. In the code provided there are three mistake which stop the code to get run successfully; find those mistakes and explain why they need to be corrected to be able to get the code run
 2. Add embedding layer to the model, did you experience any improvement?
 3. Apply the code on 20_newsgroup data set we worked in the previous classes
- ```
from sklearn.datasets import fetch_20newsgroups
newsgroups_train = fetch_20newsgroups(subset='train', shuffle=True,
categories=categories,)
```

### \*\*Bonus question

1. Plot the loss and accuracy using history object
2. Predict over one sample of data and check what will be the prediction for that
3. Plot loss and accuracy in Tensorboard
- 4.

### ICP Submission Guidelines (for In Class students):

1. ICP Submission is in pairs of two students.
2. Once completed, must be presented to TA or Instructor before the completion of the class
3. Submission after class is considered as a late submission. (Check the late submission policy in the syllabus)
4. ICP Code with brief explanation should be pushed to GitHub. Submit GitHub link through the Feedback Form:

[https://docs.google.com/forms/d/e/1FAIpQLSf95923cdvpyChdUSsApPcX9dAhT55hLKpKfepP-y\\_7S6f0xQ/viewform](https://docs.google.com/forms/d/e/1FAIpQLSf95923cdvpyChdUSsApPcX9dAhT55hLKpKfepP-y_7S6f0xQ/viewform)

### Online Submission Guidelines (for Online students):

1. Submit your source code and documentation to GitHub and represent the work through wiki page properly (submit your screenshots as well. The screenshot should have both the code and the output)
2. Comment your code appropriately
3. Video Submission (2 – 3 min video showing the demo of the ICP, with brief voice over on the code explanation)
4. Submission after class is considered as a late submission. (Check the late submission policy in the syllabus)
5. Use the following Google link to submit your ICP # (GitHub wiki page link for ICP #):

[https://docs.google.com/forms/d/e/1FAIpQLSf95923cdvpyChdUSsApPcX9dAhT55hLKpKfepP-y\\_7S6f0xQ/viewform](https://docs.google.com/forms/d/e/1FAIpQLSf95923cdvpyChdUSsApPcX9dAhT55hLKpKfepP-y_7S6f0xQ/viewform)

### Evaluation Criteria:

1. Completeness of Features

2. Code Quality ([https://en.wikipedia.org/wiki/Best\\_coding\\_practices](https://en.wikipedia.org/wiki/Best_coding_practices))

3. Time

4. Feedback Submission

**Note:** *Cheating, plagiarism, disruptive behavior and other forms of unacceptable conduct are subject to strong sanctions in accordance with university policy. See detailed description of university policy at the following URL:* <https://catalog.umkc.edu/special-notice/academic-honesty/>