DeepLearning_Lesson5: LSTM

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/1FAIpQLSdTM-YGnO_nRQWExbADN-BbM410nk6-CpI7yYf0iLTILm3Pvw/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 Twitter dataset

Programming elements:

1. Basics of LSTM
2. Types of RNN
3. Use case: Sentiment Analysis on the Twitter data set

Source Code:

https://umkc.box.com/s/xrxrv8un2xen18yb1p9nq2xw70tm849g

In class programming:

1. Save the model and use the saved model to predict on new text data (ex, "**A lot of good things are happening. We are respected again throughout the world, and that's a great thing**.@realDonaldTrump")
2. Apply GridSearchCV on the source code provided in the class
3. Apply the code on spam data set available in the source code (text classification on the **spam.csv** data set)

   **Bonus

   Visualize Loss and Accuracy on the Tensorboard

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

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/1FAIpQLSdEYQD-i-BfVp1jIDVfS7odWH6UkPjMVhkYzw-ovXD14D0XUA/viewform

Evaluation Criteria:

1. Completeness of Features

2. Code Quality (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-notices/academic-honesty/*