**DeepLearning\_Lesson6: Text Classification using both CNN and 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 review Image Reading, Convolutional Neural Network, how CNN works, and also LSTM model. Finally, we learn more advanced topic related to these.

**Use Case Description:**

Text Classification of IMDB review dataset using CNN and LSTM Model.

**Programming elements:**

Feeding text as Input, feeding the image. Saving and loading model

**Source Code:**

https://umkc.box.com/s/ph14glwmwdc7ncpmltc2baxbegr00bhw

**In class programming:**

1. Save the model and then in separate working file try to load the model and see the evaluation result by loading the model.
2. In the class use case we called the IMDB data set using the built-in function in KERAS library. Run the same code with calling the **imd\_master.csv** included in the source code (you can use the code for reading text contains in the slides)

\*\*\* Apply some NLP techniques on review column in the data set like

* + 1. Lower() the text
    2. Lemmatize the text
    3. Remove stop words

**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://goo.gl/forms/HEJyYaiUi3MKXKP22>

**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/1FAIpQLSdTM-YGnO\_nRQWExbADN-BbM410nk6-CpI7yYf0iLTILm3Pvw/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/*](https://catalog.umkc.edu/special-notices/academic-honesty/)