Project Announcement: CS 5890/6890 Special Topics Applied Deep Learning (02/02/2023)

Hi class!

Time to fix your groups for projects. This project will be an **individual/group (maximum 2 students)** project.

The project can be:

- A research or survey project on following topics:
 - Machine learning or deep learning theories and applications
 - Computer vision
 - Speech recognition
 - Natural Language Processing/ Text mining
 - o Graph representation learning
 - o Generative modeling
- A research project
 - A Kaggle project: https://www.kaggle.com/competitions
 - Research project based on new project ideas
 - How to get new ideas?
 - Recent ML conference and journal papers such as <u>NeurIPS</u>, <u>ICML</u>, <u>ICLR</u>, <u>CVPR</u>, <u>JMLR</u>, <u>KDD</u>, <u>TKDE</u>, <u>ECCV</u>, <u>EMNLP</u>, <u>AAAI</u>, <u>IJCAI</u>, <u>ICDM</u>, <u>CIKM</u>, and <u>SDM</u>. Another source of papers is <u>arxiv</u>.
 - Be careful about the availability of the dataset
 - Deliverables: project proposal presentation (02/14/2023), 1 page project proposal report (02/14/2023), research paper presentation (02/28/2023 and 03/02/2023), and final project paper (6 pages 2 column IEEE format; without references; due 04/28/2023), and final project presentation (04/25/2023 and 04/27/2023).
- A survey project
 - Reading a large number of papers from the abovementioned venues
 - Obeliverables: project proposal presentation (02/14/2023), 1 page project proposal report (due 02/14/2023), research paper presentation (02/28/2023 and 03/02/2023), and final project paper (8 pages 2 column IEEE format; without references; due 04/28/2023), and final project presentation (04/25/2023 and 04/27/2023).
- If your work is good, you will not only get good grades in the project but also you might have an option for conference paper/journal submission with the collaboration of the instructor.

Other useful links:

- Google's Python class
- Google Colab Tutorial
- TensorFlow Tutorials
- Pytorch tutorials
- mxnet tutorials