Midterm Paper Presentation

We have selected around 20 papers from top-tier conferences such as NIPS, AAAI, ICML, CVPR. Each student is required to make an online presentation based on one paper you choose from the following list. For online presentations, you are required to share your screen and present your slides through Tencent Meeting.

The break-down of presentation score:

- Paper presentation should contain the following parts, background (20%), motivation (20%), methodology (20%) an experiments (20%). The time limit is 10 min talk + 2 min Q&A for each presentation (10%). You should submit the slides in PowerPoint or PDF format after presentation (10%).
- Code reimplementation (10% optional points). It is encouraged to reimplement the paper results by yourself. You can find an open-source code and test it on HUAWEI GPUs.

Guidelines for creating a successful presentation:

- Think of yourselves as teacher for a day. It is important to find the right level of technical depth for the audience, to expose the core technical ideas without going into excessive or overwhelming detail. Some presentations will be more like tutorials and some more like surveys, but most should try to identify at least one technical 'nugget' that can be taught in reasonable depth to the class in a limited time slot.
- You can look into the papers cited by the initial paper or papers that cited this initial paper to get a deeper understanding. It is encouraged to list your reading materials (e.g., papers, talks, blogs) in the last few slides.
- Because timing is hard to predict, you are encouraged to maintain some flexibility in terms of the topics you will cover. It is a good idea to have one or two sections in the latter half of your slides that you can skip depending on the time. When you are presenting, keep an eye on the time and adjust the pacing towards the end accordingly.
- **Use of external sources and credit attribution**: Be sure to explicitly give credit whenever you use material from other sources. It is okay if you 'borrow' any slides or graphics, but be sure to give the original source in small font on the bottom of each slide. If you show a demo based on somebody's code, be sure to clearly announce this. Failure to follow these guidelines will hurt your score for the slides. It is not acceptable to use an entire slide deck from another source 'as is' as the basis for your presentation.

The paper list is attached as follows:

1) Binary Neural Networks
https://papers.nips.cc/paper/6573-binarized-neural-networks.pdf

2) Quantum advantage in training binary neural networks
https://arxiv.org/pdf/1810.12948.pdf

3) Understanding deep features with computer-generated imagery
https://www.cv-foundation.org/openaccess/content_iccv_2015/papers/Aubry_Understanding_Deep_Features_ICCV_2015_paper.pdf

4) Visualizing and Understanding Convolutional Networks
https://cs.nyu.edu/~fergus/papers/zeilerECCV2014.pdf

5) Deep Residual Learning for Image Recognition
https://arxiv.org/pdf/1512.03385.pdf

6) Densely Connected Convolutional Networks
https://arxiv.org/pdf/1608.06993.pdf

7) Attention Is All You Need
https://arxiv.org/pdf/1706.03762.pdf

8) Streaming End-to-End Speech Recognition for Mobile Devices
https://arxiv.org/pdf/1811.06621.pdf

9) Show, Attend and Tell: Neural Image Caption Generation with Visual Attention
https://arxiv.org/pdf/1502.03044.pdf

10) Photo-Realistic Single Image Super-Resolution Using a Generative Adversarial Network
http://openaccess.thecvf.com/content_cvpr_2017/papers/Ledig_Photo-Realistic_Single_Image_CVPR_2017_paper.pdf

11) Wasserstein Generative Adversarial Networks
http://proceedings.mlr.press/v70/arjovsky17a/arjovsky17a.pdf1

12) Image-to-Image Translation with Conditional Adversarial Networks
http://openaccess.thecvf.com/content_cvpr_2017/papers/Isola_Image-To-Image_Translation_With_CVPR_2017_paper.pdf

13) Mastering the game of Go with deep neural networks and tree search
http://web.iitd.ac.in/~sumeet/Silver16.pdf

14) Adaptive Graph Convolutional Neural Networks
https://www.aaai.org/ocs/index.php/AAAI/AAAI18/paper/viewFile/16642/16554

15) Fully-Convolutional Siamese Networks for Object Tracking
https://arxiv.org/abs/1606.09549

16) Unpaired Image-to-Image Translation using Cycle-Consistent Adversarial Networks
https://arxiv.org/pdf/1703.10593.pdf

17) Fully convolutional networks for semantic segmentation
https://openaccess.thecvf.com/content_cvpr_2015/papers/Long_Fully_Convolutional_Networks_2015_CV

PR_paper.pdf

18) Generative adversarial nets
https://arxiv.org/pdf/1406.2661.pdf

19) A Simple Framework for Contrastive Learning of Visual Representations
http://proceedings.mlr.press/v119/chen20j/chen20j.pdf

20) An Image is Worth 16x16 Words: Transformers for Image Recognition at Scale
https://arxiv.org/pdf/2010.11929.pdf