**Статьи для семинара**

**Темы**

* Тренировка сетей и сжатие сетей [1-5]
* Классификация изображений [6-18].
* Детектирование объектов [19-22].
* Сегментация изображений [23].
* Распознавание людей и их лиц [24, 25].
* Генеративно-состязательные сети (GAN) [26-28].

**Список статей**

1. Huang, G., et al., *Snapshot Ensembles: Train 1, get M for free.* CoRR, 2017. **abs/1704.00109**.

2. Hinton, G., O. Vinyals, and J. Dean, *Distilling the knowledge in a neural network.* arXiv preprint arXiv:1503.02531, 2015.

3. You, Y., et al., *100-epoch ImageNet Training with AlexNet in 24 Minutes.* arXiv preprint arXiv:1709.05011, 2017.

4. Lei, T. and Y. Zhang, *Training RNNs as Fast as CNNs.* arXiv preprint arXiv:1709.02755, 2017.

5. Han, S., H. Mao, and W.J. Dally, *Deep Compression: Compressing Deep Neural Network with Pruning, Trained Quantization and Huffman Coding.* CoRR, 2015. **abs/1510.00149**.

6. Huang, G., Z. Liu, and K.Q. Weinberger, *Densely Connected Convolutional Networks.* CoRR, 2016. **abs/1608.06993**.

7. Iandola, F.N., et al., *SqueezeNet: AlexNet-level accuracy with 50x fewer parameters and <1MB model size.* CoRR, 2016. **abs/1602.07360**.

8. Howard, A.G., et al., *MobileNets: Efficient Convolutional Neural Networks for Mobile Vision Applications.* CoRR, 2017. **abs/1704.04861**.

9. He, K., et al., *Identity Mappings in Deep Residual Networks.* CoRR, 2016. **abs/1603.05027**.

10. Zagoruyko, S. and N. Komodakis, *Wide Residual Networks.* CoRR, 2016. **abs/1605.07146**.

11. Huang, G., et al., *Deep Networks with Stochastic Depth.* CoRR, 2016. **abs/1603.09382**.

12. Jaderberg, M., et al., *Spatial Transformer Networks.* CoRR, 2015. **abs/1506.02025**.

13. Dai, J., et al., *Deformable Convolutional Networks.* CoRR, 2017. **abs/1703.06211**.

14. Wang, F., et al., *Residual Attention Network for Image Classification.* CoRR, 2017. **abs/1704.06904**.

15. DeVries, T. and G.W. Taylor, *Improved Regularization of Convolutional Neural Networks with Cutout.* arXiv preprint arXiv:1708.04552, 2017.

16. Larsson, G., M. Maire, and G. Shakhnarovich, *FractalNet: Ultra-Deep Neural Networks without Residuals.* CoRR, 2016. **abs/1605.07648**.

17. Zhang, X., et al., *ShuffleNet: An Extremely Efficient Convolutional Neural Network for Mobile Devices.* CoRR, 2017. **abs/1707.01083**.

18. Lin, M., Q. Chen, and S. Yan, *Network In Network.* CoRR, 2013. **abs/1312.4400**.

19. Lin, T.-Y., et al., *Feature Pyramid Networks for Object Detection.* CoRR, 2016. **abs/1612.03144**.

20. Lin, T.-Y., et al., *Focal Loss for Dense Object Detection.* arXiv preprint arXiv:1708.02002, 2017.

21. Huang, J., et al., *Speed/accuracy trade-offs for modern convolutional object detectors.* CoRR, 2016. **abs/1611.10012**.

22. Ren, J.S.J., et al., *Accurate Single Stage Detector Using Recurrent Rolling Convolution.* CoRR, 2017. **abs/1704.05776**.

23. He, K., et al., *Mask R-CNN.* CoRR, 2017. **abs/1703.06870**.

24. Zhang, K., et al., *Joint Face Detection and Alignment using Multi-task Cascaded Convolutional Networks.* CoRR, 2016. **abs/1604.02878**.

25. Xiao, T., et al. *Joint detection and identification feature learning for person search*. in *Proc. CVPR*. 2017.

26. Arjovsky, M., S. Chintala, and L. Bottou, *Wasserstein gan.* arXiv preprint arXiv:1701.07875, 2017.

27. Zhu, J.-Y., et al., *Unpaired Image-to-Image Translation using Cycle-Consistent Adversarial Networks.* CoRR, 2017. **abs/1703.10593**.

28. Berthelot, D., T. Schumm, and L. Metz, *BEGAN: Boundary Equilibrium Generative Adversarial Networks.* CoRR, 2017. **abs/1703.10717**.