



PAP0042 – “REDES NEURAIIS PROFUNDAS E APLICAÇÕES”

(64h/aula – 4 créditos)

NÍVEL: Pós-Graduação

Ementa:

- Introdução ao aprendizado de máquina
- Algoritmo *Backpropagation*
- Redes Multi-Layer Perceptron
- Convolutional Neural Network.
- Recurrent Neural Networks (RNN).
- VGG Net.
- Region Based Convolutional Neural Networks (R-CNN).
- Fully Convolutional Neural Nets e Segmentação semântica
- GoogLeNet.
- Unsupervised Learning networks (autoencoders).
- Transfer Learning.
- Generative Adversarial networks (GAN).
- Determinação de erro: Bayesian Learning, Dropout Neural Net
- Projeto final de curso & journal club

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- *LeCun, Yann, Yoshua Bengio, and Geoffrey Hinton. "Deep learning." nature 521.7553 (2015): 436.*
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- *H. Lee, A. Battle, R. Raina, and A. Y. Ng. Efficient sparse coding algorithms. NIPS, 2007.*
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- *Ian J. Goodfellow, Quoc V. Le, Andrew M. Saxe, Honglak Lee and Andrew Y. Ng. Measuring invariances in deep networks. NIPS 2009.*
- *Christian Szegedy, Wei Liu, Yangqing Jia, Pierre Sermanet, Scott Reed, Dragomir Anguelov, Dumitru Erhan, Vincent Vanhoucke, Andrew Rabinovich: Going deeper with convolutions. CVPR 2015: 1-9*
- *R. Raina, A. Battle, H. Lee, B. Packer, and A. Y. Ng. Self-taught learning: Transfer learning from unlabeled data. ICML, 2007.*
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