Deep learning Resources, Project Links and News

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1 Links to projects and articles

1.1 News

- Salesforce Research Introduces the Swiss Army Knife of Natural Language Processing
- With strategic investment, Insilico Medicine is using deep learning to defeat aging
- Scalable and accurate deep learning with electronic health records
- IBM releases image data to improve facial recognition AI
- The AI winter is well on its way

1.2 Datasets

- Twitter Sentiment Analysis Training Corpus (Dataset)
- Useful Databases to Dig for Data (and a few more for fun!)
- MovieLens | GroupLens

1.3 History

- A history of machine translation from the Cold War to deep learning

1.4 Project Links

- DIY Deep Learning Projects
- Introduction to named entity recognition in python - Depends on the definition
- Part-of-Speech tagging tutorial with the Keras Deep Learning library – Cdiscount TechBlog
- ConvNets Series. Actual Project Prototyping with Mask R-CNN
- How to Develop a Bidirectional LSTM For Sequence Classification in Python with Keras
- Predict Sentiment From Movie Reviews Using Deep Learning
- Getting started with deep learning sentiment analysis using Python and Keras
- GitHub - shervinea/enzynet: EnzyNet: enzyme classification using 3D convolutional neural networks on spatial representation
- Index of /class/cs224n/reports
- titu1994/Image-Super-Resolution: Implementation of Super Resolution CNN in Keras.
- Move Mirror: An AI Experiment with Pose Estimation in the Browser using TensorFlow.js
- Turning Design Mockups Into Code With Deep Learning
- A Keras multithreaded DataFrame generator for millions of image files
- Credit Card Fraud Detection using Autoencoders in Keras—TensorFlow for Hackers (Part VII)

- Neural Tensor Network: Exploring Relations among Text Entities – Deep Learn

1.5 Code exercises (mainly from Kaggle)

- Bi-GRU-LSTM-CNN-Poolings-Fasttext | Kaggle
- Bidirectional LSTM with Convolution | Kaggle
- CatdogNet - Keras Convnet Starter | Kaggle
- XGBoost Starter | Kaggle
- Model averaging: XGBoost + keras | Kaggle
- Improved LSTM baseline: GloVe + dropout | Kaggle
- Visualize a CNN | Kaggle
- Hot Dog/Not Hot Dog (GPU) | Kaggle
- Food SqueezeNet | Kaggle
- CNN GAN | Kaggle
- Adversarial Learning Challenges - Getting Started | Kaggle
- Keras LinkNet | Kaggle
- CapsuleNet on MNIST | Kaggle
- CapsuleNet on Fashion MNIST | Kaggle
- Attention on Pretrained-VGG16 for Bone Age | Kaggle
- Data Preprocessing and UNet Segmentation (GPU) | Kaggle
- Image Similarity with Siamese Networks | Kaggle
- Vehicle UNet+FCL Segmentation | Kaggle

1.6 Reading

- Understanding LSTMs
- Loading big data: A detailed example of data generators with Keras
- Paragraph2Vec
- 4 Sequence Encoding Blocks You Must Know Besides RNN/LSTM in Tensorflow ů Han Xiao Tech Blog - Deep Learning, Tensorflow, Machine Learning and more!
- How to build a your own neural network from scratch in python

1.7 CNNs

- A walk though of AlexNet
- Detecting Sarcasm with Deep Convolutional Neural Networks
- What are radiological deep learning models actually learning?

1.8 GANs

- Glow: Better Reversible Generative Models
- Demystifying Generative Adversarial Networks

1.9 RNNs

- Unfolding RNN
- Unfolding RNN
- The unreasonable effectiveness of RNNs
- Recurrent Neural Networks Tutorial Part 1 Introduction to RNNs

- Recurrent Neural Networks Tutorial Part 2 Implementaing a Language model RNN with with Python Numpy and Theano
- Recurrent Neural Networks Tutorial Part 3 Backpropagation Through Time and Vanishing Gradients
- Recurrent neural networks tutorial part 4 implementing a GRU/LSTM rnn with Python and Theano

1.10 Seq2Seq

- Easy Seq2Seq
- Pactical Seq2Seq
- Sequence-to-Sequence
- Image to Latex

1.11 VAEs

- The Variational Autoencoder as a Two-Player Game—Part I

1.12 Manifold learning

- Manifold Learning Repo

1.13 Hyperparametesr

- Hyperparameter optimization with Keras

1.14 Getting started

- Getting started with Tensforflow
- Google Colab Free GPU Tutorial
- Inside the Mind of a Neural Network with Interactive Code in Tensorflow
- AutoGraph converts Python into TensorFlow graphs

1.15 Advances in the field

- NLP News
- Program Synthesis

1.16 Advanced

- Bilinear attention networks for visual question answering
- Facebook AI Proposes Group Normalization Alternative to Batch Normalization
- The Illustrated Transformer
- Stochastic Weight Averaging — a New Way to Get State of the Art Results in Deep Learning
- Deep learning of Graph Matching
- Keras: Multiple outputs and multiple losses

1.16.1 Articles

- The Natural Language Decathlon: Multitask Learning as Question Answering
- Imitation Learning - Playing hard exploration games by watching YouTube
- MolGAN: An implicit generative model for small molecular graphs
- Do Better ImageNet Models Transfer Better?
- Polynomial Regression As an Alternative to Neural Nets
- Large-Scale Stochastic Learning using GPUs

1.16.2 Deployment

- How to Deploy Deep Learning Models with AWS Lambda and Tensorflow

Twitter - Sebastian Ruder