

updated 06.02.20 🤝 181 notebooks

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| Notebook   | Added    | Description                                       | Model | Task                  | Creator       | Link   |
|--|----------|---|-------|-----------------------|---------------|--|
| 1.5B GPT2 Pretrained Chinese Model                                 | 04.22.20 | Conduct inference on GPT-2 for Chinese Language   | GPT-2 | Text Generation       | Zhibo Zhang   |  Open in Colab<br>( <a href="https://colab.research.google.com/github/imcaspar/gpt2-ml/blob/master/pretrained_model_de">https://colab.research.google.com/github/imcaspar/gpt2-ml/blob/master/pretrained_model_de</a> )                   |
| A Simple Neural Network from Scratch with PyTorch and Google Colab | 04.22.20 | Demo for building a NN using PyTorch for training | NN    | n/a                   | Elvis Saravia |  Open in Colab<br>( <a href="https://colab.research.google.com/drive/109gHWFUIUzuwhg">https://colab.research.google.com/drive/109gHWFUIUzuwhg</a> )   |
| AI Dungeon 2   | 04.22.20 | Play the game based on GPT-2                      | GPT-2 | Text Generation       | Nick Walton   |  Open in Colab<br>( <a href="https://colab.research.google.com/github/nickwalton/AIDungeon/blob/master/AIDungeon_2.ipynb">https://colab.research.google.com/github/nickwalton/AIDungeon/blob/master/AIDungeon_2.ipynb</a> )               |
| An Introduction to Natural Language in Python using spaCy          | 04.22.20 | Demo for introducing spaCy for NLP tasks          | n/a   | Lemmatizing, Chunking | Derwen.ai     |  Open in Colab<br>( <a href="https://colab.research.google.com/github/DerwenAI/spaCy_tutorial/blob/master/spaCy_tutorial.ipynb">https://colab.research.google.com/github/DerwenAI/spaCy_tutorial/blob/master/spaCy_tutorial.ipynb</a> ) |

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|--|----------|--|---------|----------------------|---------------|--|
| Analyze Text Data with Yellowbrick         | 04.22.20 | Demo for vectorizing and visualizing documents with various techniques               | Various | Embeddings           | Yelyzaveta L  |  <a href="https://colab.research.google.com/github/ElizaLo/NLP-Natural-Language-Processing/blob/master/Analyze%20Text%20Data%20with%20Yellowbrick.ipynb">Open in Colab</a><br>( <a href="https://colab.research.google.com/github/ElizaLo/NLP-Natural-Language-Processing/blob/master/Analyze%20Text%20Data%20with%20Yellowbrick.ipynb">https://colab.research.google.com/github/ElizaLo/NLP-Natural-Language-Processing/blob/master/Analyze%20Text%20Data%20with%20Yellowbrick.ipynb</a> ) |
| Bangla Article Classification With TF-Hub  | 04.22.20 | Demo for training a NN for text classification on a non-English Language with TF-Hub | NN      | Text Classification  | TensorFlow    |  <a href="https://colab.research.google.com/github/tensorflow/hub/blob/master/examples/colab/bangla_article_classification.ipynb">Open in Colab</a><br>( <a href="https://colab.research.google.com/github/tensorflow/hub/blob/master/examples/colab/bangla_article_classification.ipynb">https://colab.research.google.com/github/tensorflow/hub/blob/master/examples/colab/bangla_article_classification.ipynb</a> )  |
| BART with Javascript UI                    | 06.02.20 | Demo for conducting inference with the BART model via Javascript UI                  | BART    | Summarization        | Manuel Romero |  <a href="https://colab.research.google.com/github/mrm8488/shared_colab_notebooks/blob/master/BART_with_JS_UI.ipynb">Open in Colab</a><br>( <a href="https://colab.research.google.com/github/mrm8488/shared_colab_notebooks/blob/master/BART_with_JS_UI.ipynb">https://colab.research.google.com/github/mrm8488/shared_colab_notebooks/blob/master/BART_with_JS_UI.ipynb</a> )   |
| Basic CNN Part-of-Speech Tagger with Thinc | 06.02.20 | Demo for training a POS tagger with the Thinc framework                              | CNN     | Part-of-Speech (POS) | Explosion     |  <a href="https://colab.research.google.com/github/explosion/thinc/blob/master/examples/03_pos_tagger_basic.ipynb">Open in Colab</a><br>( <a href="https://colab.research.google.com/github/explosion/thinc/blob/master/examples/03_pos_tagger_basic.ipynb">https://colab.research.google.com/github/explosion/thinc/blob/master/examples/03_pos_tagger_basic.ipynb</a> )   |

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| Basic Neural Bag-of-Words Text Classifier with Thinc     | 06.02.20 | Demo for training a text classifier with the Thinc framework                              | n/a            | Text Classification     | Explosion                  |  <a href="https://colab.research.google.com/github/explosion/thinc/blob/master/examples/03_textcat_basic_neural.ipynb">Open in Colab</a><br>( <a href="https://colab.research.google.com/github/explosion/thinc/blob/master/examples/03_textcat_basic_neural.ipynb">https://colab.research.google.com/github/explosion/thinc/blob/master/examples/03_textcat_basic_neural.ipynb</a> )   |
| Basic Self-Attention                                     | 04.22.20 | Guide for understanding the self-attention model  | Self-Attention | n/a                     | Manuel Romero              |  <a href="https://colab.research.google.com/github/mrm8488/shared_colab_notebooks/blob/master/basic_self_attention.ipynb">Open in Colab</a><br>( <a href="https://colab.research.google.com/github/mrm8488/shared_colab_notebooks/blob/master/basic_self_attention.ipynb">https://colab.research.google.com/github/mrm8488/shared_colab_notebooks/blob/master/basic_self_attention.ipynb</a> )  |
| BBC Text Classification                                  | 04.22.20 | Demo for training an ensemble of classical ML models from SKLearn for text classification | Ensemble       | Text Classification     | srushtidhope               |  <a href="https://colab.research.google.com/github/srushtidhope/bbc-text-classification/blob/master/bbc_text_classification.ipynb">Open in Colab</a><br>( <a href="https://colab.research.google.com/github/srushtidhope/bbc-text-classification/blob/master/bbc_text_classification.ipynb">https://colab.research.google.com/github/srushtidhope/bbc-text-classification/blob/master/bbc_text_classification.ipynb</a> )                     |
| BERT (from HuggingFace Transformers) for Text Extraction | 06.02.20 | Demo for training BERT for question answering on SQuAD dataset                            | BERT           | Question Answering      | Apoorv Nandan              |  <a href="https://colab.research.google.com/github/keras-team/keras-io/blob/master/examples/nlp/ipython/text_extraction_with_bert.ipynb">Open in Colab</a><br>( <a href="https://colab.research.google.com/github/keras-team/keras-io/blob/master/examples/nlp/ipython/text_extraction_with_bert.ipynb">https://colab.research.google.com/github/keras-team/keras-io/blob/master/examples/nlp/ipython/text_extraction_with_bert.ipynb</a> ) |
| BERT Fine-Tuning Tutorial with PyTorch                   | 04.22.20 | Demo for fine-tuning BERT on the CoLA dataset for sentence classification                 | BERT           | Sentence Classification | Chris McCormick, Nick Ryan |  <a href="https://colab.research.google.com/drive/1pTuQhug6Dhl9XalK">Open in Colab</a><br>( <a href="https://colab.research.google.com/drive/1pTuQhug6Dhl9XalK">https://colab.research.google.com/drive/1pTuQhug6Dhl9XalK</a> )   |

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| Bert For Arabic QA            | 04.22.20 | Demo for fine-tuning BERT on the Arabic-SQuAD dataset   | BERT  | Question Answering                     | Hussein Mozannar           |  <a href="https://colab.research.google.com/drive/19a_jIKpjhQez0KTa_">Open in Colab</a><br>(https://colab.research.google.com/drive/19a_jIKpjhQez0KTa_)   |
| BERT Generator                | 04.22.20 | Using BERT in DeepPavlov's framework to decode and conduct text generation  | BERT  | Text Generation                        | DeepPavlov                 |  <a href="https://colab.research.google.com/github/deeppmipt/DeepPavlov/blob/docs/transformers-tutorial/examples/bert_generator.ipynb">Open in Colab</a><br>(https://colab.research.google.com/github/deeppmipt/DeepPavlov/blob/docs/transformers-tutorial/examples/bert_generator.ipynb) |
| BERT IR Clueweb Desc-Doc      | 06.02.20 | Demo for using a GCP TPU for training and conducting inference for information retrieval on the ClueWeb09 dataset on the document level | BERT  | Information Retrieval   Document Level | Zhuyun Dai                 |  <a href="https://colab.research.google.com/drive/1qFGmEz5SZrsGui5">Open in Colab</a><br>(https://colab.research.google.com/drive/1qFGmEz5SZrsGui5)   |
| BERT Word Embeddings Tutorial | 04.22.20 | Demo for understanding word embeddings with BERT  | BERT  | Embeddings                             | Chris McCormick, Nick Ryan |  <a href="https://colab.research.google.com/drive/1ZQuvAVwA3ljybezC">Open in Colab</a><br>(https://colab.research.google.com/drive/1ZQuvAVwA3ljybezC)   |
| BERT-Torch                    | 04.22.20 | Demo for training and inference using BERT for predicting masked tokens   | BERT  | Predict Masked Tokens                  | Tae Hwan Jung              |  <a href="https://colab.research.google.com/github/graykode/nlp-tutorial/blob/master/5-2.BERT/BERT_Torch.ipynb">Open in Colab</a><br>(https://colab.research.google.com/github/graykode/nlp-tutorial/blob/master/5-2.BERT/BERT_Torch.ipynb)   |

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| Bidirectional LSTM on IMDB                           | 06.02.20 | Demo for training a 2-layer bidirectional LSTM on the IMDB movie review sentiment classification dataset   | LSTM        | Sentiment Analysis   | Chollet          |  <a href="https://colab.research.google.com/github/keras-team/keras-io/blob/master/examples/nlp/ipynb/bidirectional_lstm_imdb.ipynb">Open in Colab</a><br>( <a href="https://colab.research.google.com/github/keras-team/keras-io/blob/master/examples/nlp/ipynb/bidirectional_lstm_imdb.ipynb">https://colab.research.google.com/github/keras-team/keras-io/blob/master/examples/nlp/ipynb/bidirectional_lstm_imdb.ipynb</a> )  |
| Blender - Chit Chat Chatbot 90M                      | 06.02.20 | Demo for conducting inference with the 90M param Blender model   | Transformer | Dialogue             | Facebook AI      |  <a href="https://colab.research.google.com/drive/1NX-GFLeMpQm9fZXlclPsIA6T7?usp=sharing">Open in Colab</a><br>( <a href="https://colab.research.google.com/drive/1NX-GFLeMpQm9fZXlclPsIA6T7?usp=sharing">https://colab.research.google.com/drive/1NX-GFLeMpQm9fZXlclPsIA6T7?usp=sharing</a> )   |
| Build your Own French POS tagger                     | 05.14.20 | Demo for building your own POS tagger for the French language  | n/a         | Part-of-Speech (POS) | John Snow Labs   |  <a href="https://colab.research.google.com/github/JohnSnowLabs/spark-nlp-workshop/blob/master/tutorials/colab/3-%20Build%20your%20Own%20French%20POS%20Tagger.ipynb">Open in Colab</a><br>( <a href="https://colab.research.google.com/github/JohnSnowLabs/spark-nlp-workshop/blob/master/tutorials/colab/3-%20Build%20your%20Own%20French%20POS%20Tagger.ipynb">https://colab.research.google.com/github/JohnSnowLabs/spark-nlp-workshop/blob/master/tutorials/colab/3-%20Build%20your%20Own%20French%20POS%20Tagger.ipynb</a> ) |
| Character-Level Recurrent Sequence-to-Sequence Model | 06.02.20 | Demo for implementing a basic character-level recurrent sequence-to-sequence model for translating short English sentences into short French sentences, character-by-character | LSTM        | Machine Translation  | Chollet          |  <a href="https://colab.research.google.com/github/keras-team/keras-io/blob/master/examples/nlp/ipynb/lstm_seq2seq.ipynb">Open in Colab</a><br>( <a href="https://colab.research.google.com/github/keras-team/keras-io/blob/master/examples/nlp/ipynb/lstm_seq2seq.ipynb">https://colab.research.google.com/github/keras-team/keras-io/blob/master/examples/nlp/ipynb/lstm_seq2seq.ipynb</a> )   |
| Chatbot Tutorial                                     | 04.22.20 | Demo for building a chit chat chatbot  | Seq2Seq     | Dialogue             | Matthew Inkawich |  <a href="https://colab.research.google.com/drive/1Qs6mgZ7lt53hmMbCNGST">Open in Colab</a><br>( <a href="https://colab.research.google.com/drive/1Qs6mgZ7lt53hmMbCNGST">https://colab.research.google.com/drive/1Qs6mgZ7lt53hmMbCNGST</a> )  |

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| Classification on DeepPavlov                 | 04.22.20 | Demo for training a CNN model for text classification  | CNN   | Intent Classification                 | DeepPavlov           |  <a href="https://colab.research.google.com/github/deeppmipt/DeepPavlov/blob/master/examples/classification_tutorial.ipynb">Open in Colab</a><br>( <a href="https://colab.research.google.com/github/deeppmipt/DeepPavlov/blob/master/examples/classification_tutorial.ipynb">https://colab.research.google.com/github/deeppmipt/DeepPavlov/blob/master/examples/classification_tutorial.ipynb</a> ) |
| Classify Airbnb Reviews with NLP             | 04.22.20 | Demo for training and inference using BERT for sentiment analysis  | BERT  | Sentiment Analysis                    | Tom Furu             |  <a href="https://colab.research.google.com/drive/1iEw-BfpPNhhELha7I79Ffk">Open in Colab</a><br>( <a href="https://colab.research.google.com/drive/1iEw-BfpPNhhELha7I79Ffk">https://colab.research.google.com/drive/1iEw-BfpPNhhELha7I79Ffk</a> )  |
| Classifying Names with a Character-Level RNN | 04.22.20 | Demo for building a model to classify words for their language of origin   | RNN   | Text Classification                   | Sean Robertson       |  <a href="https://colab.research.google.com/drive/10vOe4dsd7VFymz2">Open in Colab</a><br>( <a href="https://colab.research.google.com/drive/10vOe4dsd7VFymz2">https://colab.research.google.com/drive/10vOe4dsd7VFymz2</a> )   |
| ClueWeb09-B Passages (BERT-MaxP, BERT-SumP)  | 06.02.20 | Demo for using a GCP TPU for training and conducting inference for information retrieval on the ClueWeb09 dataset on the passage level | BERT  | Information Retrieval   Passage Level | Zhuyun Dai           |  <a href="https://colab.research.google.com/drive/1YAj_yA7R8Sv9QaJk">Open in Colab</a><br>( <a href="https://colab.research.google.com/drive/1YAj_yA7R8Sv9QaJk">https://colab.research.google.com/drive/1YAj_yA7R8Sv9QaJk</a> )  |
| Codalab Emocontext Language Competition      | 04.22.20 | Demo for training a model to classify emotion from dialogue  | BERT  | Text Classification                   | Petros Christodoulou |  <a href="https://colab.research.google.com/drive/1WJ-AmYzJLV7Joshl6UxtwuGJOufu">Open in Colab</a><br>( <a href="https://colab.research.google.com/drive/1WJ-AmYzJLV7Joshl6UxtwuGJOufu">https://colab.research.google.com/drive/1WJ-AmYzJLV7Joshl6UxtwuGJOufu</a> )  |
| Codalab Offensive Language Competition       | 04.22.20 | Demo for training BERT to classify offensive language text   | BERT  | Text Classification                   | Petros Christodoulou |  <a href="https://colab.research.google.com/drive/1AstCNMK5_5MMK">Open in Colab</a><br>( <a href="https://colab.research.google.com/drive/1AstCNMK5_5MMK">https://colab.research.google.com/drive/1AstCNMK5_5MMK</a> )   |

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| Colbert-AI v2.0  | 05.14.20 | Demo for using GPT-2 for generating text fine-tuned on Stephen Colbert monologues from YouTube                                  | GPT-2                      | Text Generation          | Abbas Mohammed & Shubham Rao |  <a href="https://colab.research.google.com/gist/iamabbas/b93961bc9468f333333333333333333/colbert-ai-v2.ipynb">Open in Colab</a><br>( <a href="https://colab.research.google.com/gist/iamabbas/b93961bc9468f333333333333333333/colbert-ai-v2.ipynb">https://colab.research.google.com/gist/iamabbas/b93961bc9468f333333333333333333/colbert-ai-v2.ipynb</a> )   |
| Collaborative Filtering for Movie Recommendations  | 06.02.20 | Demo for training a recommender system based on the movielens dataset via collaborative filtering                               | Keras NN                   | Recommender System       | Siddhartha Banerjee          |  <a href="https://colab.research.google.com/github/keras-team/keras-io/blob/master/examples/structured_data/collaborative_filtering.ipynb">Open in Colab</a><br>( <a href="https://colab.research.google.com/github/keras-team/keras-io/blob/master/examples/structured_data/collaborative_filtering.ipynb">https://colab.research.google.com/github/keras-team/keras-io/blob/master/examples/structured_data/collaborative_filtering.ipynb</a> )       |
| COVID 19 BERT Research Papers Semantic Search  | 04.22.20 | Demo for creating a semantic search engine to search for COVID related research papers  | BERT                       | Semantic Search          | teamrzaki                    |  <a href="https://colab.research.google.com/github/theamrzaki/COVID-19-BERT-ResearchPapers-Semantic-Search/blob/master/COVID_19_BERT_Resear">Open in Colab</a><br>( <a href="https://colab.research.google.com/github/theamrzaki/COVID-19-BERT-ResearchPapers-Semantic-Search/blob/master/COVID_19_BERT_Resear">https://colab.research.google.com/github/theamrzaki/COVID-19-BERT-ResearchPapers-Semantic-Search/blob/master/COVID_19_BERT_Resear</a> ) |
| Cross-Lingual Similarity and Semantic Search Engine with Multilingual Universal Sentence Encoder | 04.22.20 | Demo for using the Multilingual Universal Sentence Encoder module and use it for sentence similarity across multiple languages. | Universal Sentence Encoder | Semantic Text Similarity | TensorFlow                   |  <a href="https://colab.research.google.com/github/tensorflow/hub/blob/master/examples/colab/semantic_similarity.ipynb">Open in Colab</a><br>( <a href="https://colab.research.google.com/github/tensorflow/hub/blob/master/examples/colab/semantic_similarity.ipynb">https://colab.research.google.com/github/tensorflow/hub/blob/master/examples/colab/semantic_similarity.ipynb</a> )  |
| Custom Classifier on Top of Transformers Language Models   | 06.02.20 | Demo for training a transformer for sentiment analysis with the Polish language   | PolBERTa                   | Sentiment Analysis       | Marcin Zablocki              |  <a href="https://colab.research.google.com/drive/1sajgpLTrTJDzRSIxyc">Open in Colab</a><br>( <a href="https://colab.research.google.com/drive/1sajgpLTrTJDzRSIxyc">https://colab.research.google.com/drive/1sajgpLTrTJDzRSIxyc</a> )   |

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| Data Augmentation by Paraphrasing                       | 05.14.20 | Demo for conducting inference with a GPT-2 model trained on the ParaNMT-50M dataset | GPT-2    | Paraphrasing   | Rasa                  |  Open in Colab<br>( <a href="https://colab.research.google.com/drive/1RGWrQv3e0CRDPD">https://colab.research.google.com/drive/1RGWrQv3e0CRDPD</a> )   |
| Deeppavlov BERT Showcase                                | 05.14.20 | Demo for using DeepPavlov library for various NLP tasks                             | Various  | Framework      | Kapil Chauhan         |  Open in Colab<br>( <a href="https://colab.research.google.com/drive/1PC7G5giFfaXBBDH_mXHVOn45">https://colab.research.google.com/drive/1PC7G5giFfaXBBDH_mXHVOn45</a> )   |
| DialoGPT Using Transformers                             | 06.02.20 | Demo for conducting inference with the DialoGPT model for chit chat dialogue        | DialoGPT | Dialogue       | Manuel Romero         |  Open in Colab<br>( <a href="https://colab.research.google.com/github/mrm8488/shared_colab_notebooks/blob/master/DialoGPT_using_%F0%9F%A4%97Transformers">https://colab.research.google.com/github/mrm8488/shared_colab_notebooks/blob/master/DialoGPT_using_%F0%9F%A4%97Transformers</a> ) |
| DialoGPT- Chatbot                                       | 04.22.20 | Demo for using the DialoGPT chatbot   | GPT-2    | Dialogue       | Hugging Face          |  Open in Colab<br>( <a href="https://colab.research.google.com/drive/1uib2-bxqYKR3lRdEmOh_M">https://colab.research.google.com/drive/1uib2-bxqYKR3lRdEmOh_M</a> )   |
| E2E-TTS using ESPnet-TTS and ParallelWaveGAN (+ MelGAN) | 04.22.20 | Text to Speech demo for English, Japanese, and Mandarin                             | Various  | Text-to-Speech | Erdene-Ochir Tuguldur |  Open in Colab<br>( <a href="https://colab.research.google.com/github/espnet/notebook/blob/master/tts_realtime_demo.ipynb">https://colab.research.google.com/github/espnet/notebook/blob/master/tts_realtime_demo.ipynb</a> )   |

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| English Text To Speech                  | 04.22.20 | An English female voice (LJSpeech) demo using tugstugi/pytorch-dc-tts with the Griffin-Lim algorithm | CNN w/ Attention | Text-to-Speech         | Erdene-Ochir Tuguldur |  Open in Colab<br>( <a href="https://colab.research/github/tugstugi/pytorch-dc-tts/blob/master/notebooks/EnglishTTS.ipynb">https://colab.research/github/tugstugi/pytorch-dc-tts/blob/master/notebooks/EnglishTTS.ipynb</a> )   |
| Entity Recognizer DL                    | 05.14.20 | Demo for using NER and entity extractor for sentences  | n/a              | NER, Entity Extraction | John Snow Labs        |  Open in Colab<br>( <a href="https://colab.research/github/JohnSnowLabs/spark-nlp-workshop/blob/master/tutorials/colab/4-%20Entity%20Recognizer.ipynb">https://colab.research/github/JohnSnowLabs/spark-nlp-workshop/blob/master/tutorials/colab/4-%20Entity%20Recognizer.ipynb</a> ) |
| ESPnet Speech Translation Demonstration | 04.22.20 | Demo for Spanish to English speech translation and English speech generation                         | ESPnet           | Speech Translation     | Erdene-Ochir Tuguldur |  Open in Colab<br>( <a href="https://colab.research/github/espnet/notebook/blob/master/st_demo.ipynb">https://colab.research/github/espnet/notebook/blob/master/st_demo.ipynb</a> )   |
| Extracting Text from PDF Files          | 04.22.20 | Demo for using a PDF text extractor  | n/a              | Information Extraction | Derwen.ai             |  Open in Colab<br>( <a href="https://colab.research/github/DerwenAI/spaCy_tutorial/blob/master/Extract_Text_from_PDF.ipynb">https://colab.research/github/DerwenAI/spaCy_tutorial/blob/master/Extract_Text_from_PDF.ipynb</a> )   |

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| FastHugs: Language Modelling with Tranformers and Fastai               | 06.02.20 | Demo for training a transformer language model from scratch or fine-tune a pretrained transformer using fast.ai and Huggingface | Transformer | Language Modeling       | Morgan McGuire |  Open in Colab<br>( <a href="https://colab.research.google.com/github/morganmcg1/intentional/blob/master/_notebooks/2020-04-24-fasthugs_language_n">https://colab.research.google.com/github/morganmcg1/intentional/blob/master/_notebooks/2020-04-24-fasthugs_language_n</a> ) |
| FastText Template  | 04.22.20 | Demo using FastText template for training and inference   | FastText    | Sentence Classification | Tae Hwan Jung  |  Open in Colab<br>( <a href="https://colab.research.google.com/github/graykode/nlp-tutorial/blob/master/1-3.FastText/FastText.ipynb">https://colab.research.google.com/github/graykode/nlp-tutorial/blob/master/1-3.FastText/FastText.ipynb</a> )                               |
| Find the Shortest Path in a Graph                                      | 06.02.20 | Demo for using the Graph Nets library to predict the shortest path between two nodes in graph                                   | n/a         | Shortest Path Finding   | DeepMind       |  Open in Colab<br>( <a href="https://colab.research.google.com/github/deepmind/graph_nets/blob/master/graph_nets/demos/shortest_path.ipynb">https://colab.research.google.com/github/deepmind/graph_nets/blob/master/graph_nets/demos/shortest_path.ipynb</a> )                 |
| Fine Tune DistilGPT-2 on Marco Aurelio Meditations for Text Generation | 06.02.20 | Demo for training and conducting inference with DistilGPT-2 on the Meditations book   | DistilGPT-2 | Text Generation         | Manuel Romero  |  Open in Colab<br>( <a href="https://colab.research.google.com/github/mrm8488/shared_colab_notebooks/blob/master/distilGPT2_finetuned">https://colab.research.google.com/github/mrm8488/shared_colab_notebooks/blob/master/distilGPT2_finetuned</a> )                         |

| Notebook  | Added    | Description   | Model            | Task                | Creator                                 | Link   |
|---|----------|---|------------------|---------------------|---|--|
| Finetuning Transformers With JAX and Haiku  | 05.14.20 | Demo for using RoBERTa pre-trained model to JAX + Haiku, then finetuning the model to solve a downstream task | RoBERTa          | Text Classification | Madison May                             |  <a href="https://colab.research.google.com/drive/1kqLY-oofgLS-8_xWqr_T7sNnjsglMwe">Open in Colab</a><br>( <a href="https://colab.research.google.com/drive/1kqLY-oofgLS-8_xWqr_T7sNnjsglMwe">https://colab.research.google.com/drive/1kqLY-oofgLS-8_xWqr_T7sNnjsglMwe</a> )  |
| Fundamentals of NLP: Tokenization, Lemmatization, Stemming, and Sentence Segmentation | 04.22.20 | Demo for executing various NLP techniques via Spacy and NLTK  | n/a              | Various             | Elvis Saravia                           |  <a href="https://colab.research.google.com/github/mrm8488/shared_colab_notebooks/blob/master/nlp_basics_tokenizat">Open in Colab</a><br>( <a href="https://colab.research.google.com/github/mrm8488/shared_colab_notebooks/blob/master/nlp_basics_tokenizat">https://colab.research.google.com/github/mrm8488/shared_colab_notebooks/blob/master/nlp_basics_tokenizat</a> )                  |
| Generate word embeddings using Swivel   | 05.14.20 | Demo for using Swivel to learn word embeddings  | Swivel           | Embeddings          | Ronald Denaux & Jose Manuel Gomez-Perez |  <a href="https://colab.research.google.com/github/HybridNLP2018/tutorial/blob/master/01_capturing_word_e">Open in Colab</a><br>( <a href="https://colab.research.google.com/github/HybridNLP2018/tutorial/blob/master/01_capturing_word_e">https://colab.research.google.com/github/HybridNLP2018/tutorial/blob/master/01_capturing_word_e</a> )   |
| Generating Names with a Character-Level RNN   | 04.22.20 | Demo for building a model to generate words from their language of origin                                     | RNN              | Text Generation     | Sean Robertson                          |  <a href="https://colab.research.google.com/drive/165YAVmrWuuM-ESZ2ELUJahkpgH3fy">Open in Colab</a><br>( <a href="https://colab.research.google.com/drive/165YAVmrWuuM-ESZ2ELUJahkpgH3fy">https://colab.research.google.com/drive/165YAVmrWuuM-ESZ2ELUJahkpgH3fy</a> )   |
| Getting Started Transformers  | 04.22.20 | Intro to transformers, different frameworks, and inference  | BERT, DistilBERT | Tutorial            | Hugging Face                            |  <a href="https://colab.research.google.com/github/huggingface/transformers/blob/master/notebooks/02-transformers.ipynb">Open in Colab</a><br>( <a href="https://colab.research.google.com/github/huggingface/transformers/blob/master/notebooks/02-transformers.ipynb">https://colab.research.google.com/github/huggingface/transformers/blob/master/notebooks/02-transformers.ipynb</a> ) |

| Notebook   | Added    | Description   | Model     | Task                | Creator                | Link   |
|--|----------|---|-----------|---------------------|------------------------|--|
| Git Quora Insincere Questions Classification         | 04.22.20 | Demo for training and inference several models on the Quora Insincere Questions dataset | RNN, LSTM | Text Classification | Abeer Abu Zayed        |  Open in Colab<br>( <a href="https://colab.research.google.com/github/AbeerAbuZayed/Quora-Insincere-Questions-Classification/blob/master/Quora_Insincere_Ques">https://colab.research.google.com/github/AbeerAbuZayed/Quora-Insincere-Questions-Classification/blob/master/Quora_Insincere_Ques</a> ) |
| Goal-Oriented Bot in DeepPavlov                      | 04.22.20 | Demo for building goal-oriented chatbot using DeepPavlov's framework                    | RNN       | Dialogue            | DeepPavlov             |  Open in Colab<br>( <a href="https://colab.research.google.com/github/deepmipt/DeepPavlov/blob/master/examples/gobot_extended_tut">https://colab.research.google.com/github/deepmipt/DeepPavlov/blob/master/examples/gobot_extended_tut</a> )   |
| Google JSON API Custom Search Engine for Pywombat    | 04.22.20 | Use Google's Custom Search engine API to search about the topic of exercise             | API       | Search              | Oleksis Fraga Menández |  Open in Colab<br>( <a href="https://colab.research.google.com/github/oleksis/notebooks/blob/master/customsearch_api_p">https://colab.research.google.com/github/oleksis/notebooks/blob/master/customsearch_api_p</a> )   |
| GPT-2 that Runs from Colab with Javascript Interface | 04.22.20 | Demo for training GPT-2 1.5B inference w/ front end                                     | GPT-2     | Text Generation     | Manuel Romero          |  Open in Colab<br>( <a href="https://colab.research.google.com/github/mrm8488/shared_colab_notebooks/blob/master/GPT2_with_JS_UI.ipynb">https://colab.research.google.com/github/mrm8488/shared_colab_notebooks/blob/master/GPT2_with_JS_UI.ipynb</a> )   |

| Notebook  | Added    | Description  | Model               | Task                 | Creator        | Link   |
|---|----------|--|---------------------|----------------------|----------------|--|
| Graph Construction                                    | 04.22.20 | Demo for building a graph model for ranking text   | PageRank            | Ranking              | Derwen.ai      |  <a href="https://colab.research.githubusercontent.com/github/DerwenAI/spaCy_tutorial/blob/master/Text_Rank.ipynb">Open in Colab</a><br>( <a href="https://colab.research.githubusercontent.com/github/DerwenAI/spaCy_tutorial/blob/master/Text_Rank.ipynb">https://colab.research.githubusercontent.com/github/DerwenAI/spaCy_tutorial/blob/master/Text_Rank.ipynb</a> )   |
| Hotel Review Sentiment Analysis Machine Learning      | 04.22.20 | Demo for training and evaluating an LSTM for sentiment analysis on tweets                                    | Logistic Regression | Sentiment Analysis   | RaihanAk       |  <a href="https://colab.research.githubusercontent.com/github/RaihanAk/Hotel-Review-Sentiment-Analysis_MachineLearning/blob/master/Hotel%20Review%20SentimentAnalysis.ipynb">Open in Colab</a><br>( <a href="https://colab.research.githubusercontent.com/github/RaihanAk/Hotel-Review-Sentiment-Analysis_MachineLearning/blob/master/Hotel%20Review%20SentimentAnalysis.ipynb">https://colab.research.githubusercontent.com/github/RaihanAk/Hotel-Review-Sentiment-Analysis_MachineLearning/blob/master/Hotel%20Review%20SentimentAnalysis.ipynb</a> ) |
| How to Build a Simple Text Classifier With TF-Hub     | 04.22.20 | Demo for training and inference on the IMDB Movie Dataset  | NNLM                | Sentiment Analysis   | TensorFlow Hub |  <a href="https://colab.research.githubusercontent.com/github/tensorflow/hub/blob/master/docs/tutorials/text_classification_with_tfhub.ipynb">Open in Colab</a><br>( <a href="https://colab.research.githubusercontent.com/github/tensorflow/hub/blob/master/docs/tutorials/text_classification_with_tfhub.ipynb">https://colab.research.githubusercontent.com/github/tensorflow/hub/blob/master/docs/tutorials/text_classification_with_tfhub.ipynb</a> )  |
| How to Build a Simple Text Classifier with TF-Hub     | 04.22.20 | Demo for training a NN for text classification with TF-Hub   | NN                  | Text Classification  | TensorFlow     |  <a href="https://colab.research.githubusercontent.com/github/tensorflow/hub/blob/master/docs/tutorials/text_classification_with_tfhub.ipynb">Open in Colab</a><br>( <a href="https://colab.research.githubusercontent.com/github/tensorflow/hub/blob/master/docs/tutorials/text_classification_with_tfhub.ipynb">https://colab.research.githubusercontent.com/github/tensorflow/hub/blob/master/docs/tutorials/text_classification_with_tfhub.ipynb</a> )  |
| How to Fine-tune RuPERTa-Base for POS Downstream Task | 06.02.20 | Demo for training and conducting inference with RoBERTa for part-of-speech tagging with the Spanish language | RoBERTa             | Part-of-Speech (POS) | Manuel Romero  |  <a href="https://colab.research.githubusercontent.com/github/mrm8488/shared_colab_notebooks/blob/master/RuPERTa_base_finetuning.ipynb">Open in Colab</a><br>( <a href="https://colab.research.githubusercontent.com/github/mrm8488/shared_colab_notebooks/blob/master/RuPERTa_base_finetuning.ipynb">https://colab.research.githubusercontent.com/github/mrm8488/shared_colab_notebooks/blob/master/RuPERTa_base_finetuning.ipynb</a> )  |

| Notebook  | Added    | Description   | Model   | Task              | Creator            | Link   |
|---|----------|---|---------|-------------------|--------------------|--|
| How to Generate Text  | 04.22.20 | Learn to use using different decoding methods for language generation with Transformers | GPT-2   | Text Generation   | Hugging Face       |  Open in Colab<br>( <a href="https://colab.research.google.com/github/huggingface/blog/blob/master/notebooks/02_how_to_generate.ipynb">https://colab.research.google.com/github/huggingface/blog/blob/master/notebooks/02_how_to_generate.ipynb</a> )   |
| How to Generate Text:<br>Using Different Decoding Methods for Language Generation with Transformers | 04.22.20 | Demo for using various decoding parameters in GPT-2 inference                           | GPT-2   | Text Generation   | Patrick von Platen |  Open in Colab<br>( <a href="https://colab.research.google.com/github/huggingface/blog/blob/master/notebooks/02_how_to_generate.ipynb">https://colab.research.google.com/github/huggingface/blog/blob/master/notebooks/02_how_to_generate.ipynb</a> )   |
| How to Train a Language Model   | 04.22.20 | Use a large web crawled dataset to train a transformer from scratch                     | RoBERTa | Language Modeling | Hugging Face       |  Open in Colab<br>( <a href="https://colab.research.google.com/github/huggingface/blog/blob/master/notebooks/01_how_to_train.ipynb">https://colab.research.google.com/github/huggingface/blog/blob/master/notebooks/01_how_to_train.ipynb</a> )   |
| How to Use Light Pipelines  | 05.14.20 | Demo for using SparkNLP pipeline class for preprocessing operations                     | n/a     | Preprocessing     | John Snow Labs     |  Open in Colab<br>( <a href="https://colab.research.google.com/github/JohnSnowLabs/spark-nlp-workshop/blob/master/tutorials/colab/1-%20How%20to%20Use%20Light%20Pipelines.ipynb">https://colab.research.google.com/github/JohnSnowLabs/spark-nlp-workshop/blob/master/tutorials/colab/1-%20How%20to%20Use%20Light%20Pipelines.ipynb</a> ) |

| Notebook   | Added    | Description   | Model   | Task                     | Creator      | Link  |
|--|----------|---|---------|--------------------------|--------------|---|
| How to Use Pipelines                             | 04.22.20 | Transformers pipelines provides a high-level, easy to use, API for doing inference over a variety of downstream-tasks, including: Sentence classification, Token classification, Question Answering, Mask-Filling, Feature Extraction | Various | Fine-Tuning              | Hugging Face |  <a href="https://colab.research.google.com/github/huggingface/transformers/blob/master/notebooks/03-pipelines.ipynb">Open in Colab</a><br>( <a href="https://colab.research.google.com/github/huggingface/transformers/blob/master/notebooks/03-pipelines.ipynb">https://colab.research.google.com/github/huggingface/transformers/blob/master/notebooks/03-pipelines.ipynb</a> ) |
| Hugging Face + Weights & Biases                  | 05.14.20 | Demo for training BERT on the MRPC dataset with Wandb visualizations  | BERT    | Semantic Text Similarity | Hugging Face |  <a href="https://colab.research.google.com/drive/1NEiqNPhiouu2pPwvTYMz9F8">Open in Colab</a><br>( <a href="https://colab.research.google.com/drive/1NEiqNPhiouu2pPwvTYMz9F8">https://colab.research.google.com/drive/1NEiqNPhiouu2pPwvTYMz9F8</a> )   |
| HuggingTweets - Train a Model to Generate Tweets | 06.02.20 | Demo for training and conducting inference with GPT-2 on tweets   | GPT-2   | Text Generation          | Boris Dayma  |  <a href="https://colab.research.google.com/github/borisdayma/huggingtweets/blob/master/huggingtweets-demo.ipynb">Open in Colab</a><br>( <a href="https://colab.research.google.com/github/borisdayma/huggingtweets/blob/master/huggingtweets-demo.ipynb">https://colab.research.google.com/github/borisdayma/huggingtweets/blob/master/huggingtweets-demo.ipynb</a> )             |
| Hybrid Goal-Oriented Bot                         | 04.22.20 | Train a goal-oriented chatbot using DeepPavlov's framework  | RNN     | Dialogue                 | DeepPavlov   |  <a href="https://colab.research.google.com/github/deeppmipt/dp_tutorials/blob/master/Tutorial_3_Hybrid_bc">Open in Colab</a><br>( <a href="https://colab.research.google.com/github/deeppmipt/dp_tutorials/blob/master/Tutorial_3_Hybrid_bc">https://colab.research.google.com/github/deeppmipt/dp_tutorials/blob/master/Tutorial_3_Hybrid_bc</a> )                             |

| Notebook  | Added    | Description   | Model     | Task                                | Creator               | Link   |
|---|----------|---|-----------|-------------------------------------|-----------------------|--|
| Inference Demo for Mellotron on Google COLAB  | 04.22.20 | Conduct inference on Mellotron: a multispeaker voice synthesis model based on Tacotron 2 GST that can make a voice emote and sing without emotive or singing training data. | Mellotron | Text-to-Speech                      | Erdene-Ochir Tuguldur |  <a href="https://colab.research.google.com/github/yhgon/mellotron/blob/master/inference_colab.ipynb">Open in Colab</a><br>(https://colab.research.google.com/github/yhgon/mellotron/blob/master/inference_colab.ipynb)                                   |
| Intro to Keras for Engineers  | 06.02.20 | Demo for using Keras to build real-world machine learning solutions   | n/a       | Framework                           | Chollet               |  <a href="https://colab.research.google.com/drive/1IWUGZarlbORaHYU">Open in Colab</a><br>(https://colab.research.google.com/drive/1IWUGZarlbORaHYU)   |
| Intro to Keras for Researchers  | 05.14.20 | Demo for using Keras framework for research experiments   | n/a       | Framework                           | Chollet               |  <a href="https://colab.research.google.com/drive/1qKPITI879YHTxb">Open in Colab</a><br>(https://colab.research.google.com/drive/1qKPITI879YHTxb)   |
| Intro to Thinc for Beginners: Defining a Simple Model and Config & Wrapping PyTorch, TensorFlow and MXNet | 06.02.20 | Demo for defining a model and config & wrapping PyTorch, TensorFlow and MXNet using the Thinc framework   | n/a       | Framework                           | Explosion             |  <a href="https://colab.research.google.com/github/explosion/thinc/blob/master/examples/00_intro_to_thinc.ipynb">Open in Colab</a><br>(https://colab.research.google.com/github/explosion/thinc/blob/master/examples/00_intro_to_thinc.ipynb)             |
| Keras OCR   | 04.22.20 | Demo for OCR inference  | CRNN      | Optical Character Recognition (OCR) | Manuel Romero         |  <a href="https://colab.research.google.com/github/mrm8488/shared_colab_notebooks/blob/master/keras_ocr_custom.ipynb">Open in Colab</a><br>(https://colab.research.google.com/github/mrm8488/shared_colab_notebooks/blob/master/keras_ocr_custom.ipynb) |

| Notebook                               | Added    | Description  | Model       | Task                  | Creator                                 | Link  |
|--|----------|--|-------------|-----------------------|---|---|
| Keras Overview                         | 04.22.20 | Demo for getting an in-depth introduction to TensorFlow  | NN          | n/a                   | TensorFlow                              |  <a href="https://colab.research/github/tensorflow/docs/blob/master/site/en/guide/keras/overview.ipynb">Open in Colab</a><br>( <a href="https://colab.research/github/tensorflow/docs/blob/master/site/en/guide/keras/overview.ipynb">https://colab.research/github/tensorflow/docs/blob/master/site/en/guide/keras/overview.ipynb</a> ) |
| Knowledge Graph Embeddings             | 05.14.20 | Demo for learning knowledge graph embeddings from WordNet  | n/a         | Embeddings            | Ronald Denaux & Jose Manuel Gomez-Perez |  <a href="https://colab.research/github/HybridNLP2018/tutorial/blob/master/02_knowledge_graph.ipynb">Open in Colab</a><br>( <a href="https://colab.research/github/HybridNLP2018/tutorial/blob/master/02_knowledge_graph.ipynb">https://colab.research/github/HybridNLP2018/tutorial/blob/master/02_knowledge_graph.ipynb</a> )          |
| MarianMT en-ROMANCE                    | 05.14.20 | Demo for conducting machine translation for several languages  | Transformer | Machine Translation   | Sam Shleifer                            |  <a href="https://colab.research/drive/1z9UtSETxVrDhYnHYTFNrz">Open in Colab</a><br>( <a href="https://colab.research/drive/1z9UtSETxVrDhYnHYTFNrz">https://colab.research/drive/1z9UtSETxVrDhYnHYTFNrz</a> )  |
| Mongolian Text To Speech with Tacotron | 04.22.20 | This is a Mongolian text to speech inference demo using the data from the Mongolian Bible audio book with Tacotron | Tacotron    | Text-to-Speech        | Erdene-Ochir Tuguldur                   |  <a href="https://colab.research/github/tugstugi/mongolian-nlp/blob/master/misc/Tacotron_Mon">Open in Colab</a><br>( <a href="https://colab.research/github/tugstugi/mongolian-nlp/blob/master/misc/Tacotron_Mon">https://colab.research/github/tugstugi/mongolian-nlp/blob/master/misc/Tacotron_Mon</a> )                              |
| Morpho Tagger                          | 04.22.20 | Demo for using a morphological tagger  | n/a         | Morphological Tagging | DeepPavlov                              |  <a href="https://colab.research/github/deeppmipt/DeepPavlov/blob/master/examples/morphotagger_exam">Open in Colab</a><br>( <a href="https://colab.research/github/deeppmipt/DeepPavlov/blob/master/examples/morphotagger_exam">https://colab.research/github/deeppmipt/DeepPavlov/blob/master/examples/morphotagger_exam</a> )        |

| Notebook  | Added    | Description   | Model | Task                           | Creator        | Link  |
|---|----------|---|-------|--------------------------------|----------------|---|
| Multi-Lingual BERT on XQUAD - Cased                 | 04.22.20 | Demo for using Multi-Lingual BERT for translation on 11 languages               | BERT  | Machine Translation            | Manuel Romero  |  <a href="https://colab.research.google.com/github/mrm8488/shared_colab_notebooks/blob/master/Try_mrm8488_xquad.ipynb">Open in Colab</a><br>( <a href="https://colab.research.google.com/github/mrm8488/shared_colab_notebooks/blob/master/Try_mrm8488_xquad.ipynb">https://colab.research.google.com/github/mrm8488/shared_colab_notebooks/blob/master/Try_mrm8488_xquad.ipynb</a> )  |
| Multi-Lingual BERT on XQUAD - Uncased               | 04.22.20 | Demo for using Multi-Lingual BERT for translation on 11 languages               | BERT  | Machine Translation            | Manuel Romero  |  <a href="https://colab.research.google.com/github/mrm8488/shared_colab_notebooks/blob/master/Try_mrm8488_xquad.ipynb">Open in Colab</a><br>( <a href="https://colab.research.google.com/github/mrm8488/shared_colab_notebooks/blob/master/Try_mrm8488_xquad.ipynb">https://colab.research.google.com/github/mrm8488/shared_colab_notebooks/blob/master/Try_mrm8488_xquad.ipynb</a> )  |
| Natural Language Processing with RNNs and Attention | 05.14.20 | Demo for training an RNN for sentiment analysis                                 | RNN   | Sentiment Analysis             | Aurelien Geron |  <a href="https://colab.research.google.com/github/ageron/handson-ml2/blob/master/16_nlp_with_rnn.ipynb">Open in Colab</a><br>( <a href="https://colab.research.google.com/github/ageron/handson-ml2/blob/master/16_nlp_with_rnn.ipynb">https://colab.research.google.com/github/ageron/handson-ml2/blob/master/16_nlp_with_rnn.ipynb</a> )  |
| NER with BERT in Spark NLP                          | 06.02.20 | Demo for training and conducting inference with a custom NER pipeline with BERT | BERT  | Named Entity Recognition (NER) | John Snow Labs |  <a href="https://colab.research.google.com/github/JohnSnowLabs/spark-nlp-workshop/blob/master/tutorials/blogposts/3.NER_with_BERT.ipynb">Open in Colab</a><br>( <a href="https://colab.research.google.com/github/JohnSnowLabs/spark-nlp-workshop/blob/master/tutorials/blogposts/3.NER_with_BERT.ipynb">https://colab.research.google.com/github/JohnSnowLabs/spark-nlp-workshop/blob/master/tutorials/blogposts/3.NER_with_BERT.ipynb</a> ) |

| Notebook   | Added    | Description   | Model    | Task               | Creator           | Link  |
|--|----------|---|----------|--------------------|-------------------|---|
| Neural Network Language Model  | 04.22.20 | Train and infer with language model   | n/a      | Language Modeling  | Tae Hwan Jung     |  <a href="https://colab.research/github/graykode/nlp-tutorial/blob/master/1-1.NNLM/NNLM_Tensor.ipynb">Open in Colab</a><br>( <a href="https://colab.research/github/graykode/nlp-tutorial/blob/master/1-1.NNLM/NNLM_Tensor.ipynb">https://colab.research/github/graykode/nlp-tutorial/blob/master/1-1.NNLM/NNLM_Tensor.ipynb</a> )   |
| Open-Dialog Chatbots for Learning New Languages                              | 06.02.20 | Demo for training DialoGPT on a new dataset or language for open-dialog conversational chatbots | DialoGPT | Dialogue           | Nathan Cooper     |  <a href="https://colab.research/github/ncoop57/i-am-a-nerd/blob/master/_notebooks/2020-05-12-chatbot-part-1.ipynb">Open in Colab</a><br>( <a href="https://colab.research/github/ncoop57/i-am-a-nerd/blob/master/_notebooks/2020-05-12-chatbot-part-1.ipynb">https://colab.research/github/ncoop57/i-am-a-nerd/blob/master/_notebooks/2020-05-12-chatbot-part-1.ipynb</a> ) |
| Persian Sentiment Analysis With LSTM & Fasttext                              | 04.22.20 | Demo for training an LSTM for sentiment analysis in Persian                                     | LSTM     | Sentiment Analysis | Alireza Keshavarz |  <a href="https://colab.research/github/ashalogic/Persian-Sentiment-Analyzer/blob/master/Tutorial.ipynb">Open in Colab</a><br>( <a href="https://colab.research/github/ashalogic/Persian-Sentiment-Analyzer/blob/master/Tutorial.ipynb">https://colab.research/github/ashalogic/Persian-Sentiment-Analyzer/blob/master/Tutorial.ipynb</a> )                                  |
| Pipeline Example Performing the Bert Preprocessing with TensorFlow Transform | 04.22.20 | Demo and tutorial using TFX for production-level ML pipeline using BERT                         | BERT     | Sentiment Analysis | TensorFlow        |  <a href="https://colab.research/github/tensorflow/workshops/blob/master/blog/TFX_Pipeline_for_Bert.ipynb">Open in Colab</a><br>( <a href="https://colab.research/github/tensorflow/workshops/blob/master/blog/TFX_Pipeline_for_Bert.ipynb">https://colab.research/github/tensorflow/workshops/blob/master/blog/TFX_Pipeline_for_Bert.ipynb</a> )                          |

| Notebook   | Added    | Description  | Model    | Task               | Creator      | Link  |
|--|----------|--|----------|--------------------|--------------|---|
| Pointer Generator Seq2Seq Network  | 04.22.20 | Implementation uses the concept of having a pointer generator network to diminish some problems that appears with the normal seq2seq network | Seq2Seq  | Summarization      | teamrzaki    |  <a href="https://colab.research.google.com/github/theamrzaki/text_summarization/blob/master/Implementation%20/Model_4_generator.ipynb">Open in Colab</a><br>( <a href="https://colab.research.google.com/github/theamrzaki/text_summarization/blob/master/Implementation%20/Model_4_generator.ipynb">https://colab.research.google.com/github/theamrzaki/text_summarization/blob/master/Implementation%20/Model_4_generator.ipynb</a> ) |
| Pre-training SmallBERTa  | 05.14.20 | Demo for pretraining a small sized version of BERT on the SpamClickBait News dataset   | BERT     | Language Modeling  | Aditya Malte |  <a href="https://colab.research.google.com/gist/aditya-malte/2d4f896f471bed3e/smallberta_pretrain.ipynb">Open in Colab</a><br>( <a href="https://colab.research.google.com/gist/aditya-malte/2d4f896f471bed3e/smallberta_pretrain.ipynb">https://colab.research.google.com/gist/aditya-malte/2d4f896f471bed3e/smallberta_pretrain.ipynb</a> )   |
| Predicting Movie Review Sentiment with BERT on TF Hub  | 04.22.20 | Sentiment analysis using BERT  | BERT     | Sentiment Analysis | FirmAI       |  <a href="https://colab.research.google.com/github/google-research/bert/blob/master/predicting_movie_reviews_with_bert_on_tf_hub.ipynb">Open in Colab</a><br>( <a href="https://colab.research.google.com/github/google-research/bert/blob/master/predicting_movie_reviews_with_bert_on_tf_hub.ipynb">https://colab.research.google.com/github/google-research/bert/blob/master/predicting_movie_reviews_with_bert_on_tf_hub.ipynb</a> ) |
| Pyserini Demo on COVID-19 Dataset (Paragraph Index)  | 05.14.20 | Demo for searching the COVID-19 Open Research Dataset (release of 2020/04/03) from AI2, with paragraph index                                 | Pyserini | Ranking            | Castorini    |  <a href="https://colab.research.google.com/github/castorini/anserini-notebooks/blob/master/pyserini_covid19_paragraph.ipynb">Open in Colab</a><br>( <a href="https://colab.research.google.com/github/castorini/anserini-notebooks/blob/master/pyserini_covid19_paragraph.ipynb">https://colab.research.google.com/github/castorini/anserini-notebooks/blob/master/pyserini_covid19_paragraph.ipynb</a> )                               |
| Pyserini Demo on COVID-19 Dataset (Title + Abstract Index) w/ HuggingFace Transformers Based Visualization | 05.14.20 | Demo for searching the COVID-19 Open Research Dataset (release of 2020/03/20) from AI2 with a title + abstract index.                        | Pyserini | Ranking            | Castorini    |  <a href="https://colab.research.google.com/github/castorini/anserini-notebooks/blob/master/Pyserini%2BSciBERT.ipynb">Open in Colab</a><br>( <a href="https://colab.research.google.com/github/castorini/anserini-notebooks/blob/master/Pyserini%2BSciBERT.ipynb">https://colab.research.google.com/github/castorini/anserini-notebooks/blob/master/Pyserini%2BSciBERT.ipynb</a> )   |

| Notebook                                      | Added    | Description  | Model       | Task                | Creator         | Link   |
|---|----------|--|-------------|---------------------|-----------------|--|
| Pyserini Demo on Robust04                     | 05.14.20 | Demo provides a brief overview of how to use Pyserini, the Python interface to Anserini, to search the collection from TREC 2004 | Pyserini    | Ranking             | Castorini       |  Open in Colab<br>( <a href="https://colab.research.google.com/github/castorini/anserini-notebooks/blob/master/pyserini_robust04_demo.ipynb">https://colab.research.google.com/github/castorini/anserini-notebooks/blob/master/pyserini_robust04_demo.ipynb</a> )                           |
| Pyserini Demo on the MS MARCO Passage Dataset | 05.14.20 | Demo replicates the BM25 baseline for the MS MARCO passage ranking task with Pyserini  | Pyserini    | Ranking             | Castorini       |  Open in Colab<br>( <a href="https://colab.research.google.com/github/castorini/anserini-notebooks/blob/master/pyserini_msmarco_passage_ranking.ipynb">https://colab.research.google.com/github/castorini/anserini-notebooks/blob/master/pyserini_msmarco_passage_ranking.ipynb</a> )       |
| Pytorch Fairseq Translation                   | 06.02.20 | Demo for conducting machine translation, English-German and English-French   | Transformer | Machine Translation | Facebook AI     |  Open in Colab<br>( <a href="https://colab.research.google.com/github/pytorch/pytorch.github.io/blob/master/assets/hub/pytorch_fairseq_translation.ipynb">https://colab.research.google.com/github/pytorch/pytorch.github.io/blob/master/assets/hub/pytorch_fairseq_translation.ipynb</a> ) |
| Question Answering with a Fine-Tuned BERT     | 04.22.20 | Demo and tutorial using BERT for conducting inference on question answering  | BERT        | Question Answering  | Chris McCormick |  Open in Colab<br>( <a href="https://colab.research.google.com/drive/1uSIWtJdZmLrl3FCN1zI5XdYlnf">https://colab.research.google.com/drive/1uSIWtJdZmLrl3FCN1zI5XdYlnf</a> )   |

| Notebook   | Added    | Description   | Model         | Task                                   | Creator            | Link   |
|--|----------|---|---------------|--|--------------------|--|
| R-GCN in PyTorch                                   | 06.02.20 | Demo for training relational graph convolutional networks (R-GCNs) for the link-prediction task within knowledge graphs | R-GCN         | Link Prediction                        | Giuseppe Futia     |  Open in Colab<br>( <a href="https://colab.research.google.com/github/giuseppefutia/machine-learning/blob/master/rgcn.ipynb">https://colab.research.google.com/github/giuseppefutia/machine-learning/blob/master/rgcn.ipynb</a> )   |
| Reformer - Pushing the Limits of Language Modeling | 06.02.20 | Demo for training the Reformer for long sequence modeling on the "Crime and Punishment" book                            | Reformer      | Text Generation                        | Patrick von Platen |  Open in Colab<br>( <a href="https://colab.research.google.com/github/patrickvonplaten/notebooks/blob/master/PyTorch_Reformer.ipynb">https://colab.research.google.com/github/patrickvonplaten/notebooks/blob/master/PyTorch_Reformer.ipynb</a> )                                       |
| Results Extraction                                 | 06.02.20 | Demo for extracting machine learning results with the AxCell model  | AxCell        | Information Extraction                 | Paperswithcode     |  Open in Colab<br>( <a href="https://colab.research.google.com/github/paperswithcode/axcell/blob/master/notebooks/results-extraction.ipynb?authkey=...">https://colab.research.google.com/github/paperswithcode/axcell/blob/master/notebooks/results-extraction.ipynb?authkey=...</a> ) |
| RoBERTa Fine-Tuning Emotion Classification         | 05.14.20 | Demo for training distilRoBERTa for emotion classification w/ PyTorchLightning  | DistilRoBERTa | Sentiment Analysis                     | Elvis Saravia      |  Open in Colab<br>( <a href="https://colab.research.google.com/drive/1nwCE6b9PXIKhv2h">https://colab.research.google.com/drive/1nwCE6b9PXIKhv2h</a> )   |
| Robust Query BERT IR                               | 06.02.20 | Demo for using a TPU for training and conducting inference for information retrieval on the passage level               | BERT          | Information Retrieval   Document Level | Zhuyun Dai         |  Open in Colab<br>( <a href="https://colab.research.google.com/drive/1G0arqNmsDj_fMOO">https://colab.research.google.com/drive/1G0arqNmsDj_fMOO</a> )   |

| Notebook                               | Added    | Description  | Model                    | Task                                  | Creator        | Link   |
|--|----------|--|--------------------------|---------------------------------------|----------------|--|
| Robust Query Passage BERT IR           | 06.02.20 | Demo for using a TPU for training and conducting inference for information retrieval on the document level | BERT                     | Information Retrieval   Passage Level | Zhuyun Dai     |  <a href="https://colab.research.google.com/drive/1lgfAvtTsGf-YHPPSfsr8BN4W8Qa">Open in Colab</a><br>(https://colab.research.google.com/drive/1lgfAvtTsGf-YHPPSfsr8BN4W8Qa)   |
| Sarcasm Classifiers (GloVe and CNN)    | 05.14.20 | Demo for training a sarcasm classifier from GloVe vectorizer   | CNN                      | Text Classification                   | John Snow Labs |  <a href="https://colab.research.google.com/github/JohnSnowLabs/spark-nlp-workshop/blob/master/tutorials/colab/8-%20Sarcasm%20.ipynb">Open in Colab</a><br>(https://colab.research.google.com/github/JohnSnowLabs/spark-nlp-workshop/blob/master/tutorials/colab/8-%20Sarcasm%20.ipynb)         |
| Sarcasm Classifiers (TF-IDF)           | 05.14.20 | Demo for training a sarcasm classifier from TF-IDF vectorizer  | Random Forest            | Text Classification                   | John Snow Labs |  <a href="https://colab.research.google.com/github/JohnSnowLabs/spark-nlp-workshop/blob/master/tutorials/colab/6-%20Sarcasm%20-IDF.ipynb">Open in Colab</a><br>(https://colab.research.google.com/github/JohnSnowLabs/spark-nlp-workshop/blob/master/tutorials/colab/6-%20Sarcasm%20-IDF.ipynb) |
| Sarcasm Classifiers (Word2vec and MLP) | 05.14.20 | Demo for training a sarcasm classifier from Word2vec vectorizer  | Multi-Layered Perceptron | Text Classification                   | John Snow Labs |  <a href="https://colab.research.google.com/github/JohnSnowLabs/spark-nlp-workshop/blob/master/tutorials/colab/7-%20Sarcasm%20.ipynb">Open in Colab</a><br>(https://colab.research.google.com/github/JohnSnowLabs/spark-nlp-workshop/blob/master/tutorials/colab/7-%20Sarcasm%20.ipynb)       |

| Notebook                            | Added    | Description  | Model     | Task                 | Creator                                 | Link   |
|-------------------------------------|----------|--|-----------|----------------------|---|--|
| Scene Text Detection with CRAFT     | 04.22.20 | This notebook uses an open source implementation of the paper Character Region Awareness for Text Detection to detect scene text on a given image. | CRAFT     | Scene Text Detection | Erdene-Ochir Tuguldur                   |  <a href="https://colab.research/github/tugstugi/dl-colab-notebooks/blob/master/notebooks/CRAFT.ipynb">Open in Colab</a><br>( <a href="https://colab.research/github/tugstugi/dl-colab-notebooks/blob/master/notebooks/CRAFT.ipynb">https://colab.research/github/tugstugi/dl-colab-notebooks/blob/master/notebooks/CRAFT.ipynb</a> )             |
| Scene Text Detection with EAST      | 04.22.20 | This notebook uses ResNet to detect text areas on a given image.   | ResNet-50 | Scene Text Detection | Erdene-Ochir Tuguldur                   |  <a href="https://colab.research/github/tugstugi/dl-colab-notebooks/blob/master/notebooks/EAST.ipynb">Open in Colab</a><br>( <a href="https://colab.research/github/tugstugi/dl-colab-notebooks/blob/master/notebooks/EAST.ipynb">https://colab.research/github/tugstugi/dl-colab-notebooks/blob/master/notebooks/EAST.ipynb</a> )                |
| Scene Text Detection with PixelLink | 04.22.20 | This notebook uses PixelLink to detect text areas on a given image.  | PixelLink | Scene Text Detection | Erdene-Ochir Tuguldur                   |  <a href="https://colab.research/github/tugstugi/dl-colab-notebooks/blob/master/notebooks/PixelLink.ipynb">Open in Colab</a><br>( <a href="https://colab.research/github/tugstugi/dl-colab-notebooks/blob/master/notebooks/PixelLink.ipynb">https://colab.research/github/tugstugi/dl-colab-notebooks/blob/master/notebooks/PixelLink.ipynb</a> ) |
| Scigraph Annotations CNN Classifier | 05.14.20 | Demo for training and evaluating a CNN model for classifying scientific articles from SciGraph   | CNN       | Text Classification  | Ronald Denaux & Jose Manuel Gomez-Perez |  <a href="https://colab.research/github/HybridNLP2018/tutorial/blob/master/09_classification_of_">Open in Colab</a><br>( <a href="https://colab.research/github/HybridNLP2018/tutorial/blob/master/09_classification_of_">https://colab.research/github/HybridNLP2018/tutorial/blob/master/09_classification_of_</a> )                          |

| Notebook   | Added    | Description  | Model                | Task                     | Creator         | Link   |
|--|----------|--|----------------------|--------------------------|-----------------|--|
| Semantic Search with Approximate Nearest Neighbors and Text Embeddings from TF-Hub         | 04.22.20 | Demo for building an approximate nearest neighbours (ANN) index using extracted embeddings | ANN                  | Semantic Text Similarity | TensorFlow      |  <a href="https://colab.research.google.com/github/tensorflow/hub/blob/master/examples/colab/semantic_approximation.ipynb">Open in Colab</a><br>(https://colab.research.google.com/github/tensorflow/hub/blob/master/examples/colab/semantic_approximation.ipynb)                             |
| Sentence Classification Using Transfer Learning with Huggingface BERT and Weights & Biases | 05.14.20 | Demo for using BERT on the CoLa dataset and using visualization via Weights & Biases       | BERT                 | Sentence Classification  | Ayush Chaurasia |  <a href="https://colab.research.google.com/drive/13ErkLg5FZHlbnUG29WNCNQPlow">Open in Colab</a><br>(https://colab.research.google.com/drive/13ErkLg5FZHlbnUG29WNCNQPlow)   |
| Sentence Classification with Word Embeddings   | 04.22.20 | Learn how to conduct sentence classification using DeepPavlov Framework                    | CNN                  | Sentence Classification  | DeepPavlov      |  <a href="https://colab.research.google.com/github/deeppmipt/dp_tutorials/blob/master/Tutorial_1_SentenceClassification.ipynb">Open in Colab</a><br>(https://colab.research.google.com/github/deeppmipt/dp_tutorials/blob/master/Tutorial_1_SentenceClassification.ipynb)                     |
| Sentiment Analysis with LSTM   | 04.22.20 | Demo for training and evaluating an LSTM for sentiment analysis on tweets                  | LSTM                 | Sentiment Analysis       | Rohit Kumar     |  <a href="https://colab.research.google.com/github/Greybeast/Sentiment-Classification-LSTM/blob/master/Sentiment%20Classification.ipynb">Open in Colab</a><br>(https://colab.research.google.com/github/Greybeast/Sentiment-Classification-LSTM/blob/master/Sentiment%20Classification.ipynb) |
| Seq2Seq(Attention)-Tensor  | 04.22.20 | Demo for training and inference using Seq2Seq model for sentence translation               | Seq2Seq w/ Attention | Machine Translation      | Tae Hwan Jung   |  <a href="https://colab.research.google.com/github/graykode/nlp-tutorial/blob/master/4-2.Seq2Seq(Attention)-Seq2Seq(Attention).ipynb">Open in Colab</a><br>(https://colab.research.google.com/github/graykode/nlp-tutorial/blob/master/4-2.Seq2Seq(Attention)-Seq2Seq(Attention).ipynb)     |

| Notebook  | Added    | Description  | Model                | Task                    | Creator       | Link   |
|---|----------|--|----------------------|-------------------------|---------------|--|
| Seq2Seq(Attention)-Torch  | 04.22.20 | Demo for training and inference using Seq2Seq model for sentence translation                                     | Seq2Seq w/ Attention | Machine Translation     | Tae Hwan Jung |  Open in Colab<br>( <a href="https://colab.research.google.com/github/graykode/nlp-tutorial/blob/master/4-2.Seq2Seq(Attention)/Seq2Seq(Attention).ipynb">https://colab.research.google.com/github/graykode/nlp-tutorial/blob/master/4-2.Seq2Seq(Attention)/Seq2Seq(Attention).ipynb</a> ) |
| Seq2Seq-Tensor  | 04.22.20 | Demo for training and inference using Seq2Seq model for word translation   | Seq2Seq              | Machine Translation     | Tae Hwan Jung |  Open in Colab<br>( <a href="https://colab.research.google.com/github/graykode/nlp-tutorial/blob/master/4-1.Seq2Seq/Seq2Seq_Tensor.ipynb">https://colab.research.google.com/github/graykode/nlp-tutorial/blob/master/4-1.Seq2Seq/Seq2Seq_Tensor.ipynb</a> )                               |
| Seq2Seq-Torch   | 04.22.20 | Demo for training and inference using Seq2Seq model for word translation   | Seq2Seq              | Machine Translation     | Tae Hwan Jung |  Open in Colab<br>( <a href="https://colab.research.google.com/github/graykode/nlp-tutorial/blob/master/4-1.Seq2Seq/Seq2Seq_Torch.ipynb">https://colab.research.google.com/github/graykode/nlp-tutorial/blob/master/4-1.Seq2Seq/Seq2Seq_Torch.ipynb</a> )                                 |
| Sequence Classification with Transformers                               | 04.22.20 | Demo for fine-tuning transformers for sentence classification on the Microsoft Research Paraphrase Corpus (MRPC) | BERT, RoBERTa        | Sentence Classification | Hugging Face  |  Open in Colab<br>( <a href="https://colab.research.google.com/drive/1l39vWjZ5jRUimSQD">https://colab.research.google.com/drive/1l39vWjZ5jRUimSQD</a> )   |
| Sequence Classification with Transformers using TensorFlow's Strategies | 04.22.20 | Demo for fine-tuning DistilBERT on Microsoft Research Paraphrase Corpus (MRPC), on a TPU                         | DistilBERT           | Sentence Classification | Hugging Face  |  Open in Colab<br>( <a href="https://colab.research.google.com/drive/1yWaLpCWImXZE2f">https://colab.research.google.com/drive/1yWaLpCWImXZE2f</a> )   |

| Notebook   | Added    | Description  | Model | Task       | Creator | Link   |
|--|----------|--|-------|------------|---------|--|
| Sequence to Sequence Learning for Performing Number Addition | 06.02.20 | Demo for training an LSTM model to learn to add two numbers, provided as strings | LSTM  | Arithmetic | Smerity |  Open in Colab<br>( <a href="https://colab.research.google.com/github/keras-team/keras-io/blob/master/examples/nlp/ipynb/addition_rnn.ipynb">https://colab.research.google.com/github/keras-team/keras-io/blob/master/examples/nlp/ipynb/addition_rnn.ipynb</a> ) |

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