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updated 09.19.20  257 notebooks

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Notebook	Added	Description	Model	Task	Creator	Source
DialogRPT	09.19.20	Demo for conducting inference with the DialogRPT model that predicts whether a reply will lead to more upvoting or higher engagement	GPT-2	Ranking	Xiang Gao	 Open in Colab
Introduction: Hands-on Graph Neural Networks	09.19.20	Demo for introducing PyTorch Geometric library by learning the node embeddings of the Karate Club dataset	GCN	Framework	PyTorch Geometric	 Open in Colab
Node Classification	09.19.20	Demo for training a GCN in node classification on the Cora dataset, where nodes represent documents, using PyTorch Geometric	GCN	Node Classification	PyTorch Geometric	 Open in Colab
Graph Classification	09.19.20	Demo for training a GCN in graph classification on the TUDatasets using PyTorch Geometric	GCN	Graph Classification	PyTorch Geometric	 Open in Colab
Scaling GNNs	09.19.20	Demo for training a Cluster-GCN on the pubmed dataset using PyTorch Geometric	Cluster-GCN	Node Classification	PyTorch Geometric	 Open in Colab
Questgen NLP Library Demo	09.11.20	Demo for using the QuestGen Library for question generation	T5	Text Generation	QuestGen	 Open in Colab
Introduction to the TensorFlow Models NLP library	09.11.20	Demo for using the TF NLP Library for building common NLP tasks which includes: pretraining, span labelling and classification	BERT	Text Classification	TensorFlow	 Open in Colab
Multi-task Training with Hugging Face Transformers and NLP	09.11.20	Demo for conducting multi-task training with the Hugging Face framework. Datasets used are STS-B, RTE and Commonsense QA.	RoBERTa	Multi-Task Training	Jason Phang	 Open in Colab
T5 IMDB Yelp	09.11.20	Demo for training the T5 model on the IMDB and Yelp Polarity Review datasets using TensorFlow	T5	Sentiment Analysis	Yeshwanth Reddy	 Open in Colab
Gradient Saliency: Explaining the Output of a HuggingFace BertForQA model	09.11.20	Demo for reviewing the output of BERT Question Answering model in TensorFlow	BERT	Question Answering	Victor Dibia	 Open in Colab
Data augmentation with transformer models for named entity recognition	09.06.20	Demo for using a pretrained masked language model to generate more samples for an NER dataset	DistilRoBERTa	Data Augmentation	Manu Romero	 Open in Colab
Part 1: Introducing txtai	09.06.20	Demo for introducing and using txtai for running similarity searches and building an embeddings index	Framework	Search	David Mezzetti	 Open in Colab
Part 2: Extractive QA with txtai	09.06.20	Demo for using txtai for extractive question answering by creating embedding and extractor instances	Framework	Question Answering	David Mezzetti	 Open in Colab
Part 3: Build an Embeddings Index from a Data Source	09.06.20	Demo for reading data from SQLite, building a Embedding index backed by word embeddings and running queries against the generated Embeddings index	Framework	Search	David Mezzetti	 Open in Colab
Part 4: Extractive QA with Elasticsearch	09.06.20	Demo for showing how to conduct extractive question-answering on top of an Elasticsearch system	Framework	Question Answering	David Mezzetti	 Open in Colab
Zero Shot Pipeline	09.06.20	Demo for conducting inference with zero-shot classification with the Hugging Face pipeline framework	Framework	Zero-Shot Classification	Hugging Face	 Open in Colab

Semantic Search Spanish	09.06.20	Demo for finding similar documents using faiss and transformers in the Spanish language	RuPERTa	Search	Manu Romero	 Open in Colab
Mining Twitter	09.06.20	Demo for extracting elements via Twitter's API and also conducting sentiment analysis	API	Text Mining	Mikhail Klassen	 Open in Colab
Mining LinkedIn	09.06.20	Demo for connecting to and extracting fields via LinkedIn's API and doing clustering analysis	API	Text Mining	Mikhail Klassen	 Open in Colab
Transformer OCR	09.06.20	Demo for training and conducting inference for OCR using a Transformer	Transformer	OCR	Himanshu Chaudhary	 Open in Colab
BERT for Text Extraction on DRCD dataset	09.06.20	Demo for training BERT on the DRCD Chinese dataset in TensorFlow	BERT	Question Answering	Vincent Wu	 Open in Colab
Detect Fake News	09.06.20	Demo for preprocessing, training and conducting Inference with BERT for detecting fake news	BERT	Text Classification	Prafull Sharma	 Open in Colab
Similarity News	09.06.20	Demo for preprocessing and training BERT sentence embeddings with TensorFlow for searching news articles based on textual similarity	BERT	Semantic Textual Similarity	Prafull Sharma	 Open in Colab
Getting Started with PyTorch	07.14.20	Demo for introducing PyTorch and Numpy	n/a	Framework	Venelin Valkov	 Open in Colab
Build Your First Neural Network with PyTorch	07.14.20	Demo for building a neural network from scratch using PyTorch. You can build it, train it on a weather dataset and save it.	nn	Quantitative	Venelin Valkov	 Open in Colab
Create a Dataset for Sentiment Analysis	07.14.20	Create a dataset for sentiment analysis by scraping user reviews for Android apps.	n/a	Web Scraping, Dataset Creation	Venelin Valkov	 Open in Colab
Deploy BERT for Sentiment Analysis with Transformers by Hugging Face and FastAPI	07.14.20	Demo for deploying a sentiment analysis BERT with FastAPI	BERT	Deployment	Venelin Valkov	 Open in Colab
Run Streamlit App From a Google Colab Notebook	07.14.20	Demo for running a streamlit frontend from Colab	n/a	Deployment	Manu Romero	 Open in Colab
FARM Building Blocks	07.14.20	Demo for training BERT German on the GermEval 2018 dataset using the Deepset framework	BERT	Text Classification	Deepset	 Open in Colab
How to Export Transformers Models to ONNX ?	07.14.20	Demo for converting a PyTorch or TensorFlow transformers model to ONNX and leverage onnxruntime to run inference tasks	n/a	Framework	Hugging Face	 Open in Colab
Advanced Text Analysis with SpaCy and Scikit-Learn	07.14.20	Demo for using SpaCy and scikit-learn for several classical machine learning tasks	n/a	Various	Explosion	 Open in Colab
SpaCy Introduction	07.14.20	Demo for using SpaCy for various text processing tasks: tokenizing, POS, NER, syntactic dependencies, chunking, embeddings	n/a	Framework	Explosion	 Open in Colab
Pride & Prejudice Analysis	07.14.20	Demo for using SpaCy with the Pride & Prejudice corpus for extracting names of all the characters from the book, visualizing characters' occurrences with regards to relative position in the book, automatically describing any character from the book, finding out which characters have been mentioned in a context of marriage, and build keywords extraction that could be used to display a word cloud	n/a	Framework	Explosion	 Open in Colab
Topic Modeling with Gensim	07.14.20	Demo for preprocessing text with SpaCy and creating topic models w/ Gensim and visualizing them	n/a	Topic Modeling	Explosion	 Open in Colab
Lightning Tour of SpaCy NLP Library	07.14.20	Demo for using SpaCy for various text processing tasks	n/a	Framework	Explosion	 Open in Colab
EDA + Classifier +		Demo for doing exploratory data analysis and		EDA,		

Streamlit on Palmer Penguin Dataset	07.14.20	training a random forrest classifier, inference with streamlit support	Random Forrest	Classification	Manu Romero	 Open in Colab
DataGene - Data Comparison Toolbox	07.14.20	Demo for using Datagene, a tool used to detect and compare dataset similarity between real and synthetic datasets as well as train, test, and validation datasets	n/a	Dataset Similarity	FirmAI	 Open in Colab
PandaPy	07.14.20	Demo for introducing PandaPy, a tool developed to improve the usability of python for finance	n/a	Framework	FirmAI	 Open in Colab
aixtextgen Train a GPT-2 Text-Generating Model w/ GPU	07.14.20	Demo for training and conducting inference with GPT-2	GPT-2	Text Generation	Max Woolf	 Open in Colab
Use Trainers from HuggingFace Transformers on GPUs for Multiple Choice	07.14.20	Demo for training (multiple-choice) SWAG dataset on either PyTorch or TensorFlow	BERT	Commonsense	Hugging Face	 Open in Colab
Transformer TTS: A Text-to-Speech Transformer in TensorFlow 2	07.14.20	Demo for conducting inference with the Forward Transformer TTS and MelGAN models	Forward Transformer TTS, MelGAN	Text-to-Speech	Axel Springer	 Open in Colab
Transformer TTS: A Text-to-Speech Transformer in TensorFlow 3	07.14.20	Demo for conducting inference with the Forward Transformer TTS and WaveRNN models	Forward Transformer TTS, WaveRNN	Text-to-Speech	Axel Springer	 Open in Colab
Transformer TTS: A Text-to-Speech Transformer in TensorFlow 4	07.14.20	Demo for conducting inference with the Autoregressive Transformer TTS and MelGAN models	Autoregressive TTS, MelGAN	Text-to-Speech	Axel Springer	 Open in Colab
Transformer TTS: A Text-to-Speech Transformer in TensorFlow 5	07.14.20	Demo for conducting inference with the Autoregressive Transformer TTS and WaveRNN models	Autoregressive TTS, WaveRNN	Text-to-Speech	Axel Springer	 Open in Colab
Fine-Tuning the Text-To-Text Transfer Transformer (T5) for Closed-Book Question Answering	07.14.20	Demo for training and conducting inference with T5 for close-book question answering by mixing 2 datasets	T5	Question Answering	Google	 Open in Colab
PyTorch Lightning Demo	07.14.20	Demo for using PyTorch Lightning on 4 examples: MNIST, GAN, Finetuning a Transformer from Huggingface, and DQN	n/a	Framework	PyTorch	 Open in Colab
T5 for Sentiment Span Extraction	07.14.20	Demo for training and conducting inference with T5 on sentiment extraction task	T5	Sentiment Extraction	Lorenzo Ampil	 Open in Colab
RoBERTa -> Longformer: Build a "Long" Version of Pretrained Models	07.14.20	Demo for replicating the procedure described in the Longformer paper to train a Longformer model starting from the RoBERTa checkpoint	RoBERTaLong	Language Modeling	AI2	 Open in Colab
Zero-Shot Learning in Modern NLP	07.14.20	Introductory notebook into zero-shot learning, has several examples	n/a	Text Classification	Joe Davison	 Open in Colab
Altair: Statistical Visualization for Python	07.14.20	Altair provides a declarative Python API for statistical visualization, built on top of Vega-Lite	n/a	Visualization	Altair	 Open in Colab
Fine Tuning Transformer for MultiClass Text Classification	07.14.20	Demo for training DistilBERT for multi-class classification on the news corpora dataset	DistilBERT	Text Classification	Abhishek Kumar Mishra	 Open in Colab
Fine Tuning Transformer for MultiLabel Text Classification	07.14.20	Demo for training BERT for multi-label classification on the toxic comments dataset	BERT	Text Classification	Abhishek Kumar Mishra	 Open in Colab
Fine Tuning Transformer for Sentiment Classification	07.14.20	Demo for training RoBERTa for classification task on the IMDB dataset; includes wandb experiment tracking	RoBERTa	Sentiment Analysis	Abhishek Kumar Mishra	 Open in Colab
Fine Tuning Transformer for Named Entity Recognition	07.14.20	Demo for training BERT for NER tasks using Pytorch and TPU	BERT	Named Entity Recognition (NER)	Abhishek Kumar Mishra	 Open in Colab
Fine Tuning Transformer for Summary Generation	07.14.20	Demo for training T5 for abstractive summarization with wandb experiment tracking	T5	Summarization	Abhishek Kumar Mishra	

						 Open in Colab
Using Gradio to Wrap a Text to Text Interface Around GPT-2	07.14.20	Demo for wrapping a GPT-2 with a UI on Gradio for conducting inference	GPT-2	Text Generation	Gradio	 Open in Colab
Using Gradio to wrap a QA BERT model	07.14.20	Demo for wrapping BERT with a UI on Gradio for conducting inference	BERT	Question Answering	Gradio	 Open in Colab
TensorFlowTTS - FastSpeech with TFLite	07.14.20	Demo for conducting inference with FastSpeech and TFLite [requires cloning repo https://github.com/dathudeptrai/TensorflowTTS]	FastSpeech	Text-to-Speech	Minh Anh	 Open in Colab
TensorFlowTTS - Tacotron2 with TFLite	07.14.20	Demo for conducting inference with Tacotron2 and TFLite [requires cloning repo https://github.com/dathudeptrai/TensorflowTTS]	Tacotron2	Text-to-Speech	Minh Anh	 Open in Colab
FastSpeech2 Inference	07.14.20	Demo for conducting inference with FastSpeech2 via TensorFlow [requires cloning repo https://github.com/dathudeptrai/TensorflowTTS]	FastSpeech2	Text-to-Speech	Minh Anh	 Open in Colab
Tacotron2 Inference	07.14.20	Demo for conducting inference with Tacotron2 via TensorFlow [requires cloning repo https://github.com/dathudeptrai/TensorflowTTS]	Tacotron2	Text-to-Speech	Minh Anh	 Open in Colab
Text Generation with Miniature GPT	07.14.20	Demo for training a minitature version of GPT for text generation	GPT	Text Generation	Apoorv Nandan	 Open in Colab
TAPAS: Weakly Supervised Table Parsing via Pre-training	07.14.20	Demo for conducting inference with TAPAS model for table parsing	TAPAS	Table Parsing	Google AI	 Open in Colab
How to Benchmark Models with Transformers	07.14.20	Demo for benchmarking models on memory consumption and inference time for both TensorFlow 2 and PyTorch	n/a	Benchmarking	Hugging Face	 Open in Colab
Text Generation with Blurr	07.14.20	Demo for how to use blurr library's text generation capabilities to train, evaluate, and deploy a BART summarization model	BART	Summarization	Wayde Gilliam	 Open in Colab
Longformer for Question Answering	07.14.20	Dem for training and conducting inference with the Longformer model	Longformer	Question Answering	Suraj Patil	 Open in Colab
Evaluation of a Model Using nlp	07.14.20	Demo for evaluating the longformer model on the TriviaQA dataset with the nlp library	Longformer	Preprocessing, Evaluation	Patrick von Platen	 Open in Colab
Divide Hugging Face Transformers Training Time by 2 or More	07.14.20	Demo for using dynamic padding on BERT in order to reduce training time	BERT	Preprocessing	Michael Benesty	 Open in Colab
Speaker Recognition	07.14.20	Demo for training a ConvNet to classify speakers from the frequency domain representation of speech recordings, obtained via Fast Fourier Transform (FFT)	ConvNet	Speaker Recognition	Fadi Badine	 Open in Colab
Text Mining Insights from Covid-19 Research Papers	07.14.20	Demo for preprocessing and extracting information from Covid-related research papers	n/a	EDA	Nikhil Narayan	 Open in Colab
Recipe Generation using Recurrent Neural Network (RNN)	07.14.20	Demo for preprocessing and training a character-based RNN for text generation of recipes with TF/Keras	RNN	Text Generation	Oleksii Trekhleb	 Open in Colab
Extractive Summarization with BERT	07.14.20	Demo for fast extractive summarization with BERT, DistilBERT and MobileBERT	BERT, DistilBERT, MobileBERT	Summarization	Chris Tran	 Open in Colab
Pre-train ELECTRA from Scratch for Spanish	07.14.20	Demo to pretraining ELECTRA from scratch and convert TF checkpoints to PyTorch	ELECTRA	Language Modeling	Chris Tran	 Open in Colab
Base Bert Model with TensorFlow Hub	07.14.20	Demo for preprocessing and training BERT for binary text classification from TF Hub via Keras	BERT	Text Classification	Prasanna Kumar	 Open in Colab
Word Sense Disambiguation and Embedding Visualization	07.14.20	Demo for training Italian RoBERTa for text classification, also includes PyTorch Lightning	RoBERTa	Text Classification	Cristiano De Nobili	 Open in Colab

with an Italian RoBERTa		fine-tuning and embedding visualization				
Transformers for Negation and Speculation	06.02.20	Demo for training and conducting inference for negation detection	BERT	Negation Detection, Scope Resolution	Aditya Khandelwal	 Open in Colab
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
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	 Open in Colab
Text Emotion Classifier with Tensorflow 2	06.02.20	Demo for training and conducting inference for emotion classification	LSTM	Text Classification	Manuel Romero	 Open in Colab
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	 Open in Colab
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	 Open in Colab
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
BART with Javascript UI	06.02.20	Demo for conducting inference with the BART model via Javascript UI	BART	Summarization	Manuel Romero	 Open in Colab
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	 Open in Colab
Training a Part-of-Speech Tagger with Transformers (BERT)	06.02.20	Demo for training a POS tagger with the Thinc framework	BERT	Part-of-Speech (POS)	Explosion	 Open in Colab
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	 Open in Colab
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	 Open in Colab
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	 Open in Colab
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	 Open in Colab
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
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	 Open in Colab
Blender - Chit Chat Chatbot 90M	06.02.20	Demo for conducting inference with the 90M param Blender model	Transformer	Dialogue	Facebook AI	 Open in Colab
Intro to Keras for Engineers	06.02.20	Demo for using Keras to build real-world machine learning solutions	n/a	Framework	Chollet	 Open in Colab
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	 Open in Colab
		Demo for training a text classification model that				

Using Pre-Trained Word Embeddings	06.02.20	uses GloVe word embeddings with the Keras framework	CNN	Embeddings	Chollet	 Open in Colab
Tutorial of the Graph Nets library	06.02.20	Demo for introducing the Graph Nets library for building/using graphs with TensorFlow	n/a	Framework	DeepMind	 Open in Colab
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
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
Sequential Question Answering Predictions	06.02.20	Demo for how to load and conduct inference with TAPAS model which allows for QA over tables	BERT	Semantic Parsing	Google AI	 Open in Colab
Text Classification From Scratch	06.02.20	Demo for training a ConvNet for sentiment analysis for the IMDB movie reviews dataset	CNN	Sentiment Analysis	Mark Omernick, Francois Chollet	 Open in Colab