

Alception PrevX

Bring AI to humanity

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2018

Part 1

NLP

Bag of Words

Count Vectorizer

TF Transform

TF IDF Transform

TF IDF Vectorizer

Ngrams

Part 1

ML

Ingest Data

Inspect Data

Feature Engineer

Classifier

Evaluate

Train Test Split

Pipeline

Cross Validation

Part 2

DL

Embeddings

Sparse vs Dense

Word 2 Vec

Paragraph to Vec

Pretrained Model

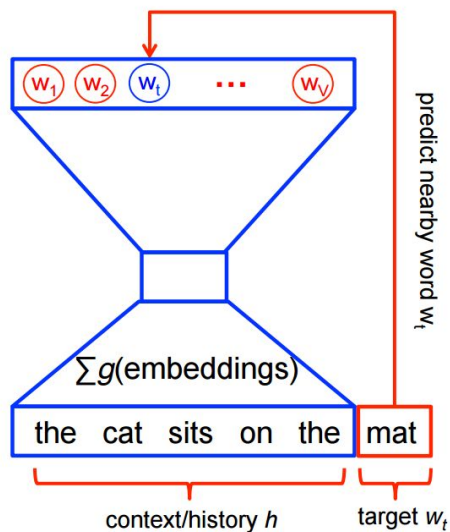
Language Model

Word 2 vec

Softmax classifier

Hidden layer

Projection layer



Sentences

The big brown bear is sitting in a chair.



Training pairs

(the, big)
(the, brown)

The big brown bear is sitting in a chair.



(big, the)
(big, brown)
(big, bear)

The big brown bear is sitting in a chair.



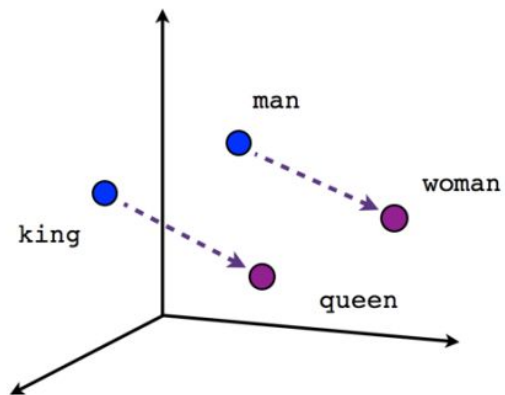
(brown, the)
(brown, big)
(brown, bear)
(brown, is)

The big brown bear is sitting in a chair.

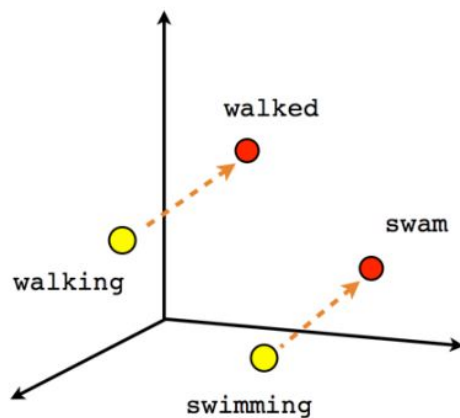


(bear, big)
(bear, brown)
(bear, is)
(bear, sitting)

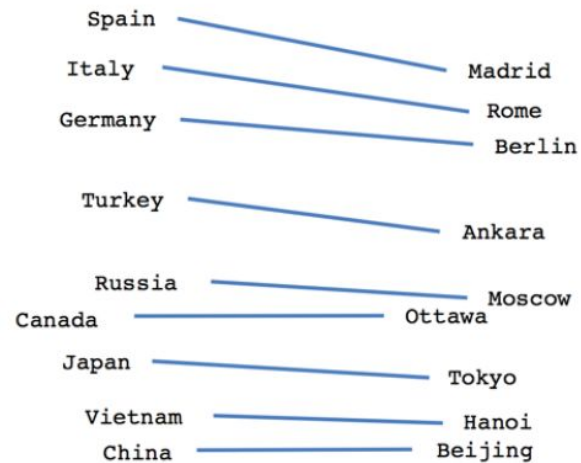
Word 2 vec



Male-Female



Verb tense



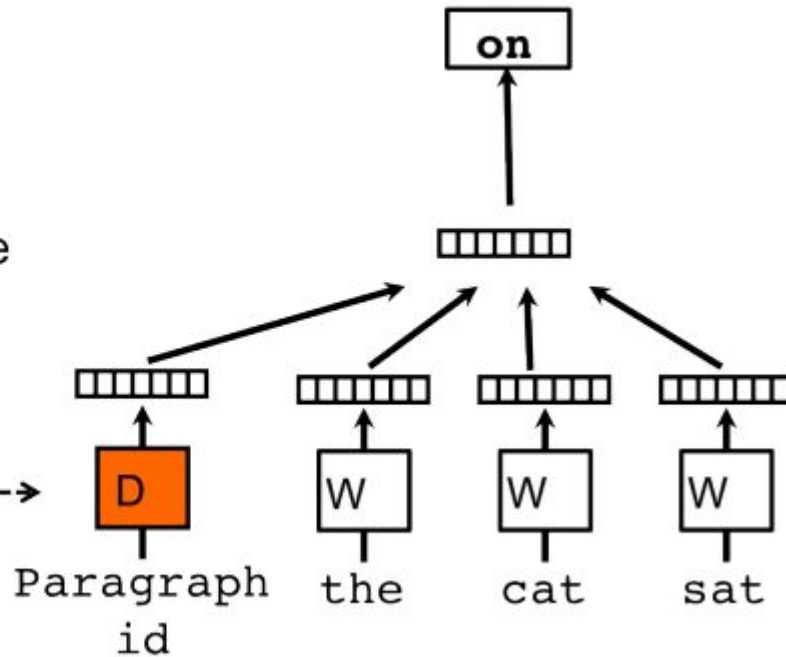
Country-Capital

Paragraph 2 vec

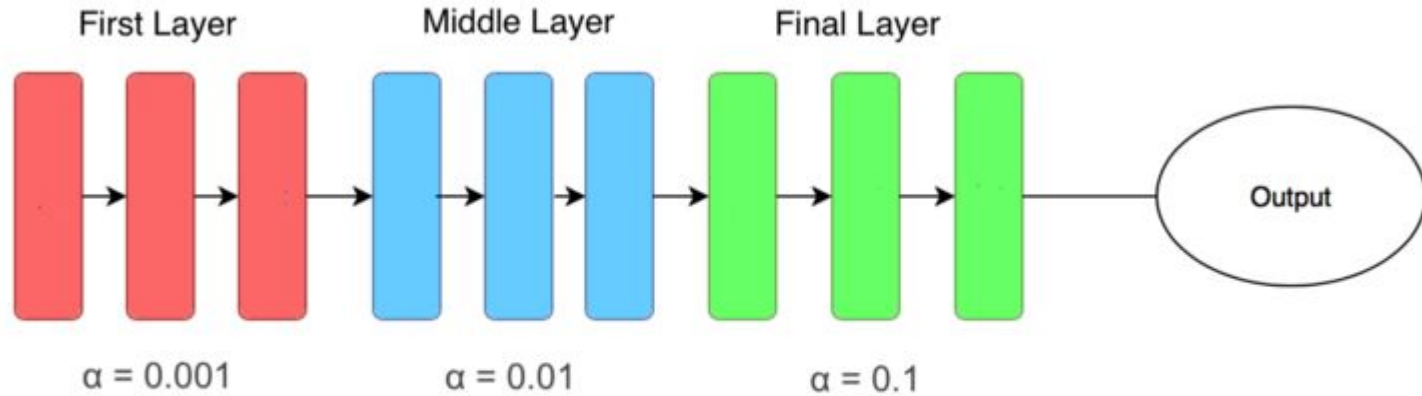
Classifier

Average/Concatenate

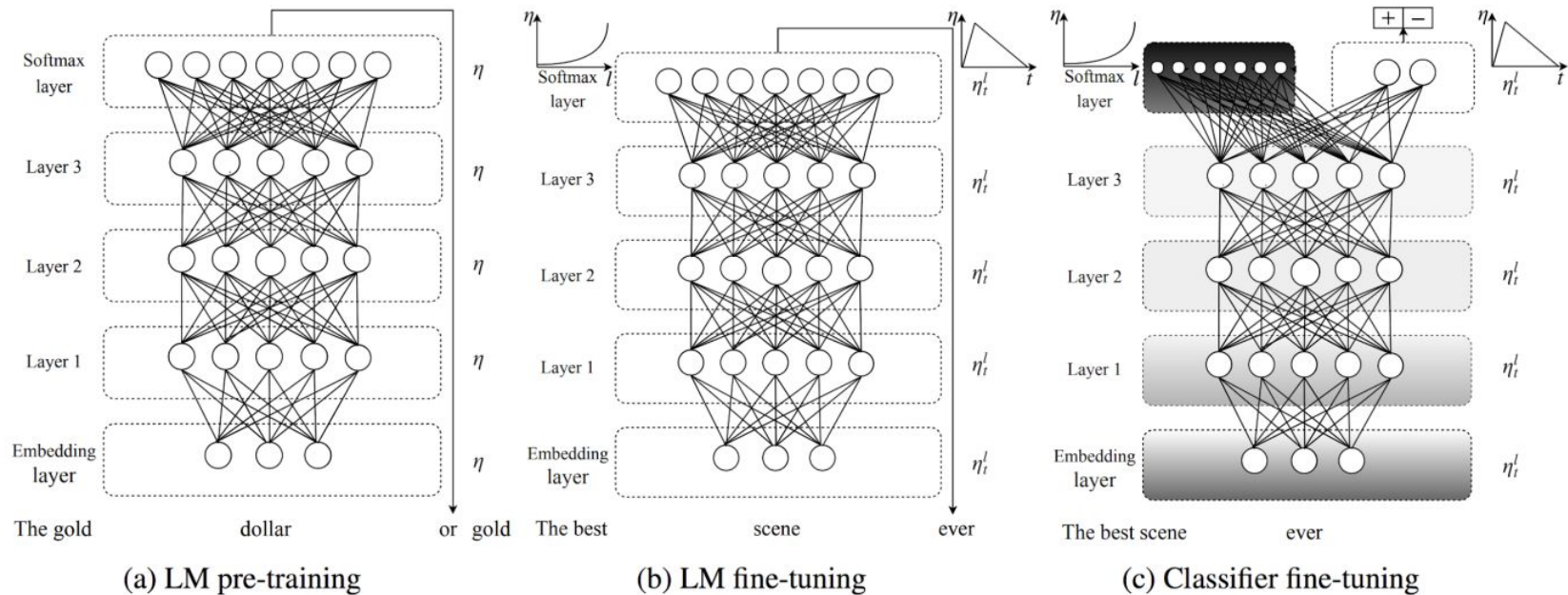
Paragraph Matrix----->



Language Models



Universal Language Model Fine-tuning for Text Classification (ULMFiT)

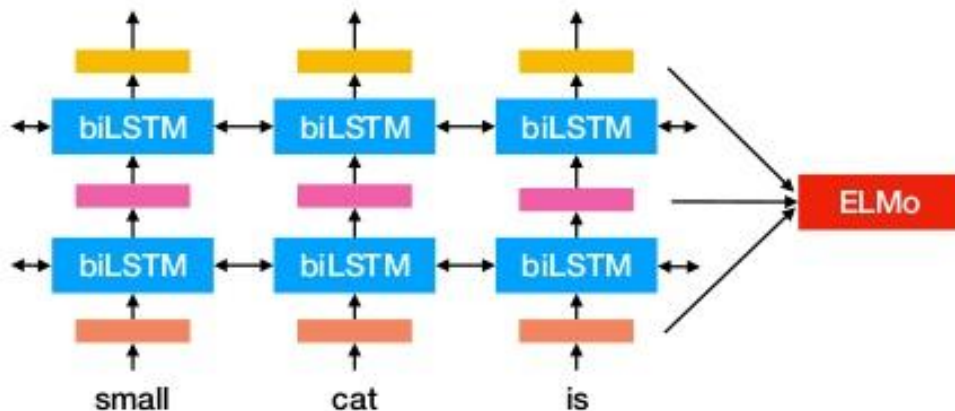




ELMO: Embeddings from Language Models

ELMo: Embeddings from Language Models

様々なエンドモデルに適用できる汎用的な意味表現を獲得
→biLMと重み付けした複数中間層を結合することで実現



OpenAI Transformer

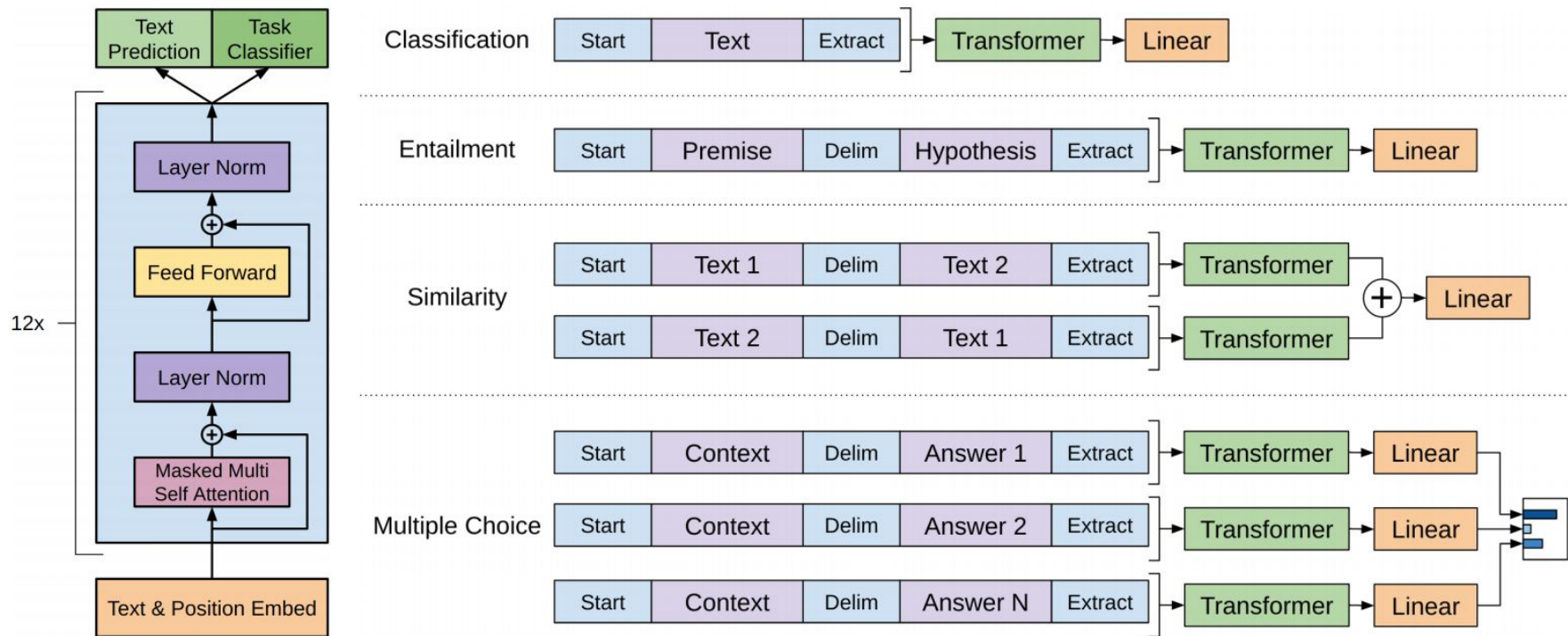


Figure 1: **(left)** Transformer architecture and training objectives used in this work. **(right)** Input transformations for fine-tuning on different tasks. We convert all structured inputs into token sequences to be processed by our pre-trained model, followed by a linear+softmax layer.

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Volkswagen
Navarra

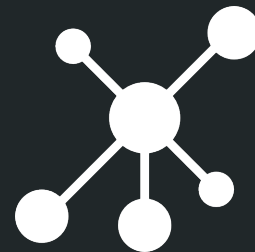


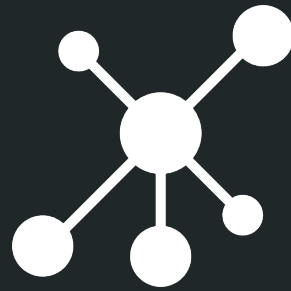
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Alception is the AI for your factory!

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