MSiA490 SEC20/28
Text Analytics
Lab 3 - Word2Vec and BERT

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Overview

- Discussions on Word2Vec and BERT

- Using BERT

Discussions on Word2Vec and BERT

Question1

How is a Skip-gram model trained? What is its training objective?
How is BERT trained? What are its training objectives?

Discussions on Word2Vec and BERT

Question 2

What makes BERT different from Word2Vec models?

Discussions on Word2Vec and BERT

Question 3

What are the advantages of pre-training for BERT?

Discussions on Word2Vec and BERT

Question 4

What are some down streaming tasks we can perform by fine-tuning BERT?

Using Bert
Hugging Face's Transformers

Install

pip install transformers

Example usage

```
> from transformers import BertTokenizer, BertModel

> tokenizer = BertTokenizer.from_pretrained("bert-base-
    uncased")
> model = BertModel.from_pretrained("bert-base-uncased")
> inputs = tokenizer("Hello world!", return_tensors="pt
    ")
> outputs = model(**inputs)
```

Discussions on Word2Vec and BERT
Using BERT
Hugging Face's Transformers
bert-as-service

Using Bert
Other options/resources

- An alternative – bert-as-service:
  https://github.com/hanxiao/bert-as-service
- A potentially outdated but still good tutorial on Hugging
  Face's Transformers:
  https://mccormickml.com/2019/05/14/BERT-word-
  embeddings-tutorial/