W207– Applied Machine Learning

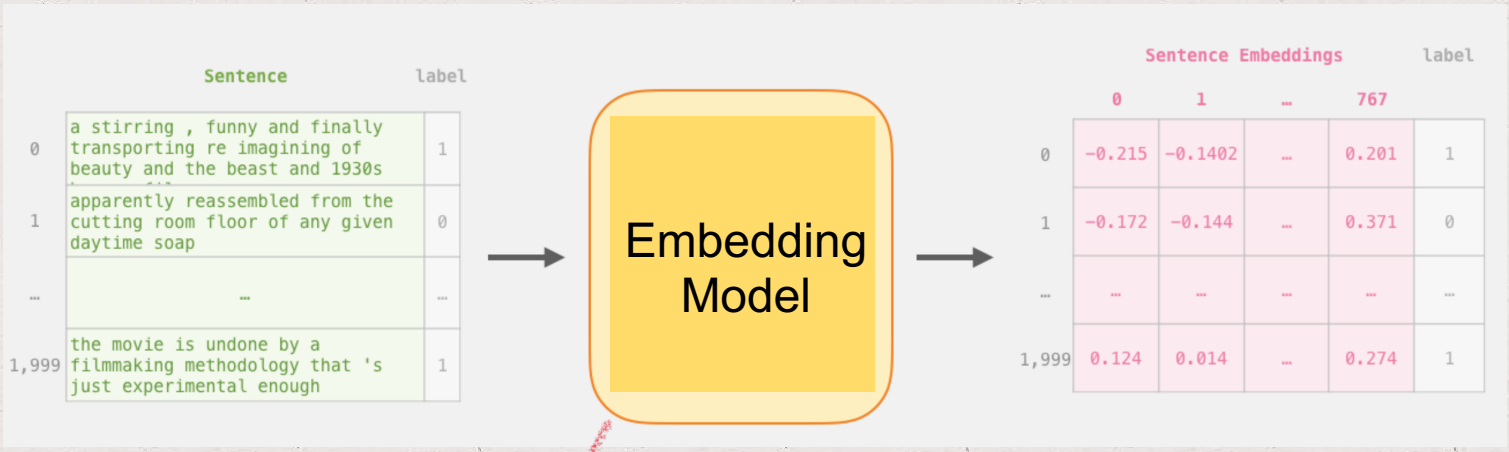
Cornelia Ilin, PhD

School of Information

UC Berkeley

Convoluted Neural Networks (CNNs)

Last week – Sequences and Embeddings



Provide these features to downstream tasks, e.g., sentiment classification

Logistic Regression

class prediction

positive

The good news: transfer-learning!

(1) Transfer the learned embeddings (model trained on a large corpus of data., e.g., BERT)

(2) Fine-tune model on a downstream tasks (e.g., sentiment classification)

Today’s learning objectives

- Convoluted Neural Networks (CNNs)
- Application: Sentiment analysis based on drug reviews

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Convolutions (applied to)
- 1D: text data
- 2D: image data

First paper using CNN for Text data was published in 2014: https://arxiv.org/abs/1408.5882

Lots of hyperparam to tune! (e.g. padding, stride, kernel size)