Author: Benjamin Smidt Created: September 22, 2022 Last Updated: October 5th, 2022

## Deep Learning Resources

### Contents

#### 1 Word Vectors

- 1. Mikolov, T., Chen, K., Corrado, G., and Dean, J. (2013). Efficient estimation of word representations in vector space. CoRR, abs/1301.3781. [Word2Vec Algorithm]
- 2. Collobert, R., Weston, J., Bottou, L., Karlen, M., Kavukcuoglu, K., and Kuksa, P. P. (2011). Natural language processing (almost) from scratch. CoRR, abs/1103.0398. [Transforming Words into Word Vectors]

# 2 Data Preprocessing

### 2.1 Weight Initialization

### 3 Loss Functions

1. Mikolov et al., "Distributed Representations of Words and Phrases and their Compositionality", ArXiv 2013 [Hierarchical Softmax (Problem of Many Classes)]

- 4 Architectures
- ${\bf 5}\quad {\bf Hyperparameters}$
- 5.1 Update Rules
- 5.2 Regularization
- 5.3 Dropout