Week 4 Comprehensive

TOTAL POINTS 10

1. What is meant by "word vector"? 1 point

- (•) A vector of numbers associated with a word.
- ( ) The latitude and longitude of the place a word originated.
- ( ) Assigning a corresponding number to each word.
- ( ) A vector consisting of all words in a vocabulary.

2. Which word is a synonym for "word vector"? 1 point

- ( ) Stack
- (•) Embedding
- ( ) Array
- ( ) Norm

3. What is the term for a set of vectors, with one vector for each word in the vocabulary? 1 point

- ( ) Embedding
- (•) Codebook
- ( ) Array
- ( ) Space

4. What is natural language processing? 1 point

- (•) Taking natural text and making inferences and predictions.
- ( ) Making natural text conform to formal language standards.
- ( ) Translating natural text characters to unicode representations.
- ( ) Translating human-readable code to machine-readable instructions.

5. What is the goal of learning word vectors? 1 point

- (•) Determine the vocabulary in the codebook.
- ( ) Labelling a text corpus, so a human doesn't have to do it.
- ( ) Find the hidden or latent features in a text.
- ( ) Given a word, predict which words are in its vicinity.

6. What function is the generalization of the logistic function to multiple dimensions? 1 point

- ( ) Squash function
- (•) Softmax function
- ( ) Exponential log likelihood
- ( ) Hyperbolic tangent function

7. What is the continuous bag of words (CBOW) approach? 1 point

- ( ) The code for word n is fed through a CNN and categorized with a softmax.
- ( ) Word n is learned from a large corpus of words, which a human has labeled.
- (•) Vectors for the neighborhood of words are averaged and used to predict word n.
- ( ) Word n is used to predict the words in the neighborhood of word n.

8. What is the Skip-Gram approach? 1 point

- ( ) Vectors for the neighborhood of words are averaged and used to predict word n.
- ( ) The code for word n is fed through a CNN and categorized with a softmax.
- ( ) Word n is learned from a large corpus of words, which a human has labeled.
- (•) Word n is used to predict the words in the neighborhood of word n.

9. What is the goal of the recurrent neural network? 1 point

- ( ) Classify an unlabeled image.
- ( ) Predict words more efficiently than Skip-Gram.
- ( ) Learn a series of images that form a video.
- (•) Synthesize a sequence of words.

10. Which model is the state-of-the-art for text synthesis?

- ( ) Multilayer perceptron
- ( ) CNN
- (•) Long short-term memory
- ( ) CBOW