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Lab Help

Word Embeddings: Intro to CBOW model, activation functions and working with Numpy

In this lecture notebook you will be given an introduction to the continuous bag-of-words model, its activation functions and some considerations when working with Numpy.

Let's dive into it!

```
In [1]: import numpy as np
```

The continuous bag-of-words model

The CBOW model is based on a neural network, the architecture of which looks like the figure below, as you'll recall from the lecture.

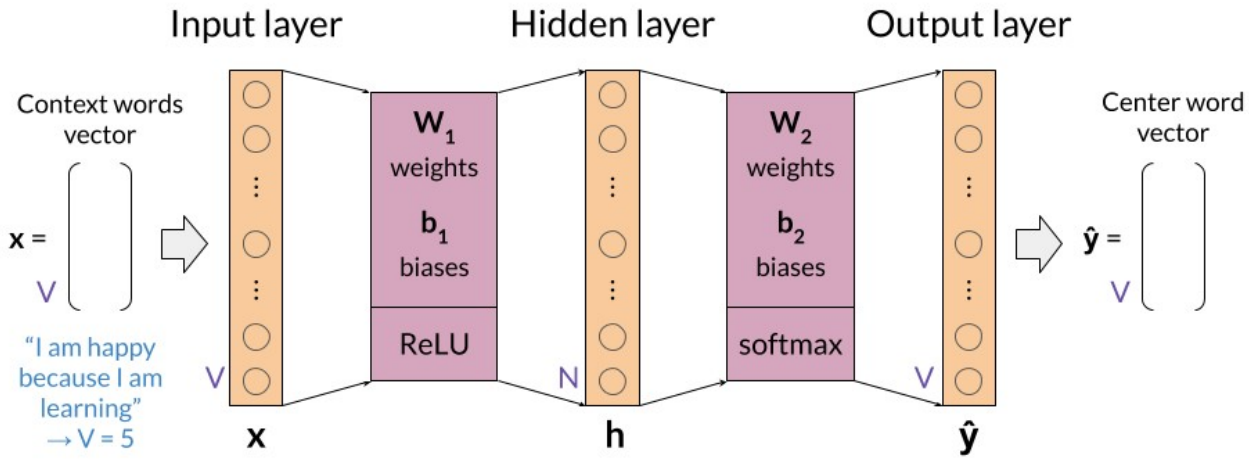

Figure 1

Activation functions

Let's start by implementing the activation functions, ReLU and softmax.

ReLU

ReLU is used to calculate the values of the hidden layer, in the following formulas:

$$\mathbf{z_1} = \mathbf{W_1}\mathbf{x} + \mathbf{b_1} \tag{1}$$