A better way: 1D convolutions

Word embeddings

cat		0.7	0.4	0.5
sitting		0.2	-0.1	0.1
there		-0.5	0.4	0.1

Convolutional filter

0.6	0.4	0.5
0.2	-0.1	0.2

0.9

dog		0.6	0.3	0.5
resting		0.3	-0.1	0.2
here		-0.5	0.4	0.1

High activations for 2-grams meaning "animal sitting"

0.84
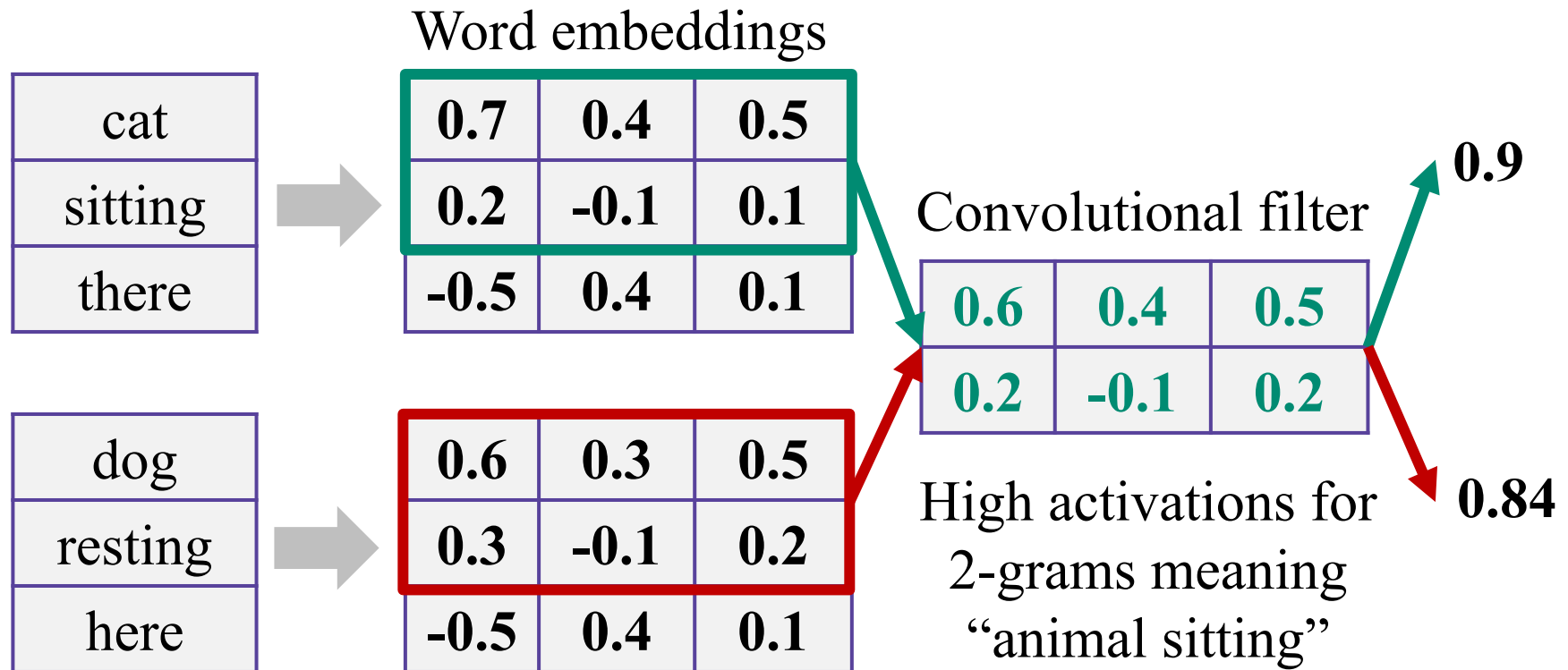
- This convolution provides high activations for 2-grams with certain meaning
- Word2vec vectors for similar words are similar in terms of cosine distance (similar to dot product)

http://bionlp-www.utu.fi/wv_demo/