

(1) Synonymy is a concept of two words being in the similar category and has a similar meaning. This is important because when these words are embedded, they position in the similar place in the space, making it easier for the models to compute them.

(2) Lexicon, the usage of surrounding words, or the contextual embedding by BERT.

(3)

(5) ~~0.1~~

$$0.02 + 0.12 + 0.42$$

$$\sqrt{0.01 + 0.09 + 0.49} \cdot \sqrt{0.04 + 0.16 + 0.36}$$

$$= \underline{0.97} \quad \text{Very similar.}$$

