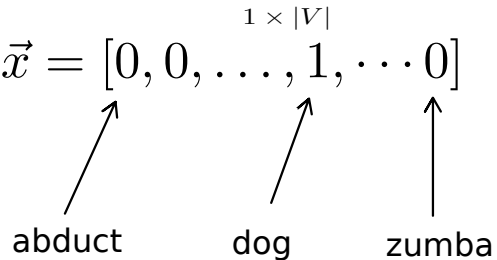


One-hot-encoded word vector

$$\vec{x} = [0, 0, \dots, 1, \dots 0]$$

$1 \times |V|$

abduct dog zumba

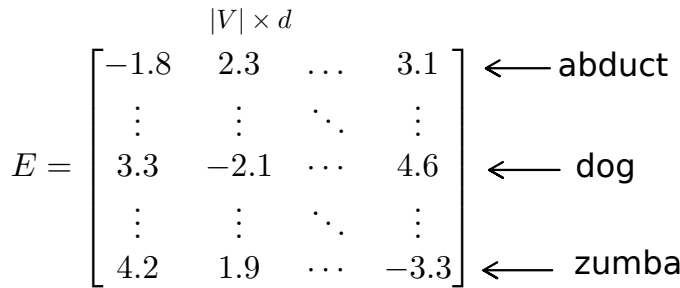


Embedding Matrix

$$E = \begin{bmatrix} -1.8 & 2.3 & \dots & 3.1 \\ \vdots & \vdots & \ddots & \vdots \\ 3.3 & -2.1 & \dots & 4.6 \\ \vdots & \vdots & \ddots & \vdots \\ 4.2 & 1.9 & \dots & -3.3 \end{bmatrix}$$

← abduct
← dog
← zumba

$|V| \times d$



$$\vec{x}E = [3.3, -2.1, \dots, 4.6]$$