One hot encoding:

D-1 → Tom purchased food.

D-2 → cat eats food.

D-3 → Dog eats food.

D-1 → [[1, 0, 0, 0, 0, 0],
[0, 1, 0, 0, 0, 0],
[0, 0, 1, 0, 0, 0]]

Vocabulary: 

→ [Tom, purchased, food, cat, eats, dog]

D-2 → [[0, 0, 0, 1, 0, 0],
[0, 0, 0, 0, 1, 0],
[0, 0, 1, 0, 0, 0]]

D-3 → [[0, 0, 0, 0, 0, 1],
[0, 0, 0, 0, 1, 0],
[0, 0, 1, 0, 0, 0]]

Test data ⇒ parrot eats food; {Parrot is not available in training vocabulary}

Advantage ⇒ Easy implementation (pd.get_dummies, onehotencoder)

Disadvantage

⇒ Sparse matrix → [10k words in vocabulary]

⇒ It wont perform with dynamic length document.

⇒ Run out of vocabulary (OOV)

⇒ No semantic meaning to the words

⇒ This is good batch

[[1,0,0], [0,1,0], [0,0,1]]