

Building Good Features

TOTAL POINTS 3

1. Select all the true statements about Principal Component Analysis (PCA):

1 / 1 point

☒ PCA is a data analysis technique



True! PCA is often used in data analysis, both to present information in a simplified manner and uncover significant relationships. See the lecture on unsupervised learning for more detail.

☐ PCA is a supervised learning technique

☒ PCA is an unsupervised learning technique



True! PCA is used to find a more compact representation of the feature space. See the lecture on unsupervised learning for more detail.

☐ PCA identifies the most significant features

☐ PCA does the same thing as auto-encoder neural networks

3. What is the best way to convert words into features that are useful for a machine learning algorithm?

1 / 1 point

☐ Many different ways, but all involve encoding the meaning of words in a numeric space.

☐ By running unsupervised clustering algorithms to identify appropriate category numbers.

☐ By translating each character into a numeric representation.

☒ Many different ways, but all involve converting characters into numbers of some kind.

☐ By using pre-computed word embeddings such as Word2Vec.



Correct! Everything from using binary encoding of individual characters to learning complex alternate representations based on word similarity. See the reading on text features for more details.