

1. What is the purpose of dimensionality reduction in enterprise datasets?

1 / 1 point

- ☐ To create clusters for grouping data points.
- ☐ To improve model performance by providing a ranking of the features and maximizing the features used.
- ☐ To predict the target with the best accuracy.
- ☒ To improve model performance by reducing the number of features used.

Correct! This is accomplished by either selecting a subset of the original features or by creating new features from them.

2. (True/False) Principal Component Analysis reduces dimensions by identifying features that can be excluded.

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- ☒ False

Correct! Instead, PCA creates new features that are linear combinations of the original ones.

- ☐ True

3. Let's say that PCA found two principal components v_1 and v_2 . v_1 accounts for 0.5 of the total amount of variance in our dataset and v_2 accounts for 0.24. Which one is more important and why?

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- ☒ v_1 because we will be able to maintain more of the original variance in the dataset.

Correct! We are able to retain more information about the original dataset by projecting

- ☐ v_1 because it reduces 50% of the total variance in the dataset.
- ☐ v_2 because it accounts for lower variance in the dataset.
- ☐ v_2 because it reduces the amount of variance in the dataset.