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Next item →

1. What is a key difference between NMF and PCA? 1 / 1 point

- ○ NMF requires orthogonal vectors created, whereas such constraint doesn't apply for PCA.
- ◉ The input matrix for NMF consists of only positive values.

  Correct! The intuition behind NMF is adding together different values so that it can never undo application of a latent feature.

- ○ PCA finds a representation of the data in a lower dimension, whereas NMF does not.
- ○ NMF decomposes the original matrix, whereas PCA does not.

2. In which case would you prefer using PCA over NMF? 1 / 1 point

- ◉ When you have a linear combination of features.

  Correct! PCA excels in handling and creating linear combination of the original features.

- ○ When the original decomposition strictly contains positive values.
- ○ When you want to decompose videos, music, or images.
- ○ When cancelling out with negative values is not desired.

3. Which of the following is the most suitable for NMF? 1 / 1 point

- ◉ Reconstruct a text document with learned topics (features).

  Correct! NMF can be very powerful in natural language processing by outputting the relationship between terms and topics, which are used as features to reconstruct the document.

- ○ Analyze potential movements and relationships of multiple stocks.
- ○ Predict the price of a rental space based on location, facility, and average rent in the surrounding area.
- ○ Learn features for a dataset in which negative values are highly insightful and valuable.

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