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Mathematics and Multivariate Statistics	**Prof. Dr. Stephan Doerfel**
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Clustering Overview
Exercises

Exercise 1. (📝 Clustering Methods)
List application examples for clustering and discuss which type of clustering method seems most appropriate.

Exercise 2. (📊, 📝 Clustering or Classification)

📊 Please join the ↗ Particify Room.

1. 📊 Decide which of the following tasks is a clustering task and which is a classification task:

    a) Data: Travel logs of tourists. Goal: Find different types of touristic behavior.

    b) Data: Travel logs of tourists. Goal: Determine which tourists prefer hotel vaccations and which camping.

    c) Data: Earth coordinates of points of interest. Goal: Predict the number of visitors for each point of interest.

    d) Data: Earth coordinates of points of interest. Goal: Determine groups of nearby points of interest.

    e) Data: Asteroid measurements. Goal: Discover different types of asteroids.

    f) Data: Asteroid measurements. Goal: Determine which asteroids are dangerous to earth.

    g) Data: Fotos of penguins. Goal: Determine the species of the penguins.

    h) Data: Fotos of penguins. Goal: Determine different types of penguins, potentially indicating different sub-species.

    i) Data: Fotos of penguins. Goal: Determine which of the penguins are male, which are female.

2. Describe another example of a dataset and a classification task as well as a clustering task on that data.

3. Revisit 1c. Which machine learning task would suggest itself much more than clustering/classification?