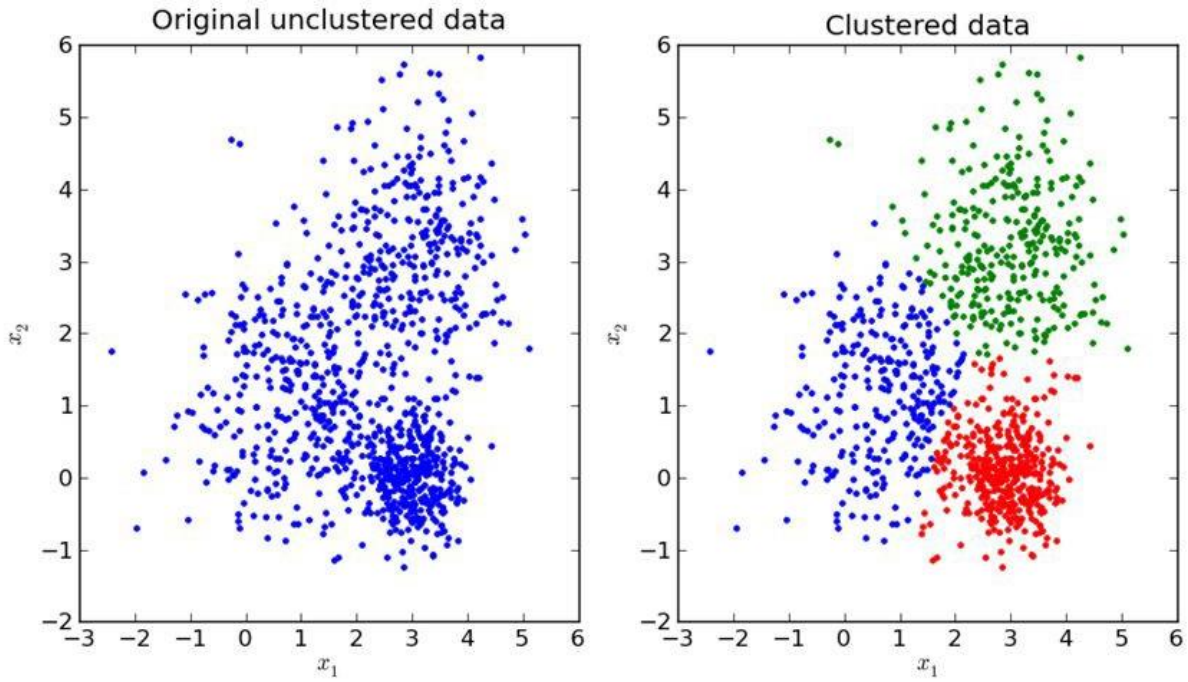
Unsupervised Classification: Clustering



Unsupervised Classification

Detect patterns in data

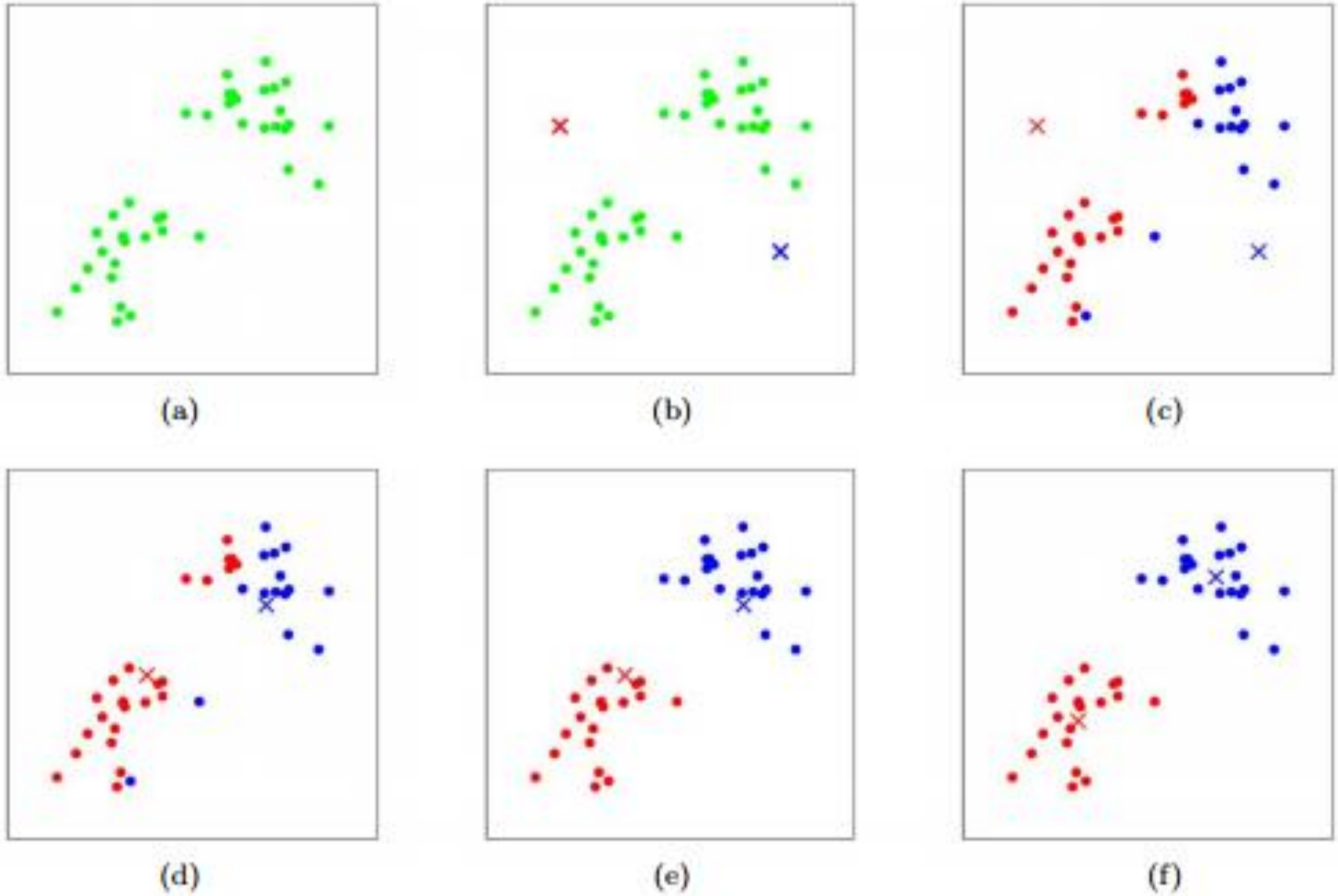
Find structure in data

Clustering

- Group together similar instances of the data

- How do we define similar?
  - ❖One option is to use distance – KMeans
    - ➢ Find distance to nearest cluster center
  - ❖Many other ways

- Difficulties
  - ❖Choosing the number of clusters


(a)
(b)
(c)
(d)
(e)
(f)

Our Project

- Want to use clustering to group together data that could pertain to different events during a time period that were recorded from the sensors

- We can get the time range from a cluster and analyze the data over that time interval, and get the EEG bands, Heart rate, etc.

Resources

- https://scikit-learn.org/stable/modules/clustering.html
- https://towardsdatascience.com/understanding-k-means-clustering-in-machine-learning-6a6e67336aa1