# Clustering Methods

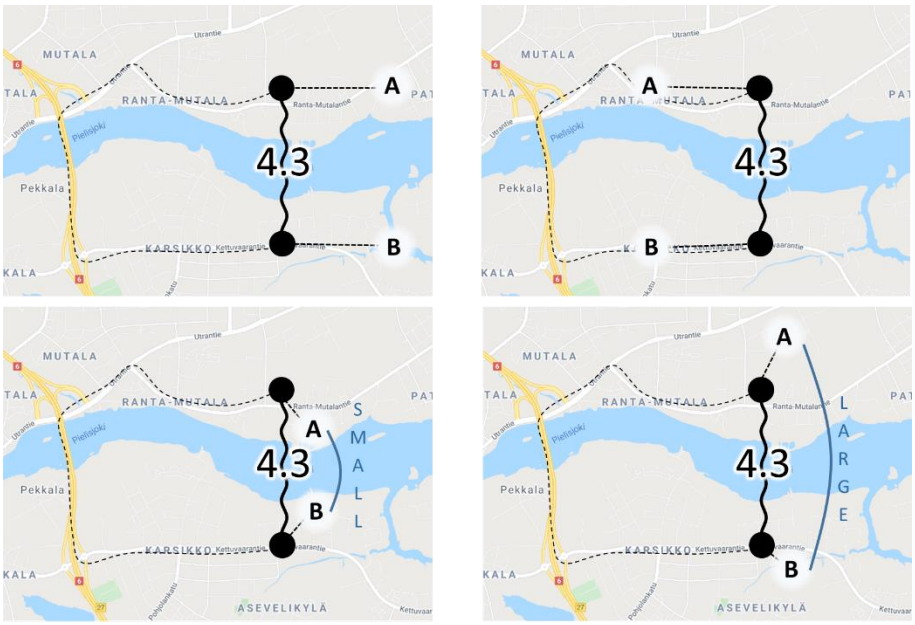
Exercises 5/7

1. Consider the following two voice biometrics applications: access to lecture room, internet banking. How does the application affect the following design choices: (a) how many clusters, (b) which algorithm to use. How about the speed? Can we tolerate a slow clustering algorithm in these applications?

2. Simplicity of clustering algorithm was discussed in the case study lecture. How important would you rank the following four criteria: (a) number of control parameters, (b) number of functions, (c) lines in source code, (d) binary code size? AI is revolutionizing programming work. Which of these criteria are mostly affected by AI?

3. A new customer joins the district heating network. How would you predict their first month consumption?

4. The overhead graph makes rapid travel distance estimation. How accurate is this estimation in the following four cases?




5. Rush hours affect the travel time to hospital. How should the clustering consider the rush hours?

6. The algorithm suggested less hospitals in a big city like Helsinki despite there are more people who need more care. Why did this happen and how should the algorithm consider this?