

Machine Learning E16 - Handin 4

Representative-based Clustering Algorithms

Group 22

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Requirements from Ira's description

- The status of the work, i.e., does it work, if not, then why.
- A discussion of plots of at least two runs of your algorithm implementations detailing what you can see. Make sure that you relate this to the discussion in the lecture or textbook about the strengths and weaknesses of the algorithms.
- A discussion of plots of the evaluation measures F1 and silhouette coefficient, detailing what you can learn from them. Include an explanation of what the evaluation measures reflect.
- Describe how you can use one of the clustering algorithms for image compression, and demonstrate the results for at least one algorithm on both images, discussing their quality and giving a reasoning for the differences.

K-means clustering

Gaussian Mixture-model Expectation Maximization

Image color compression example