



Pattern Recognition

Exercise Session 3

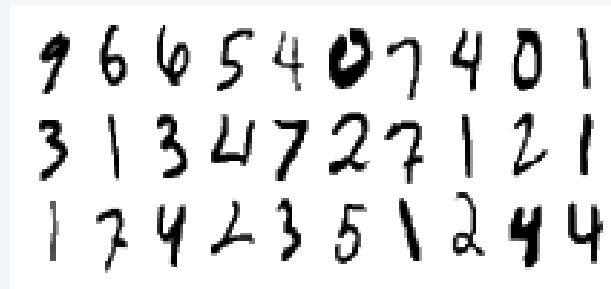
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- Cluster handwritten Digits
- Part of MNIST dataset¹
- Use pixel values only
- 784 «features» (28 x 28 image)
- Data available in csv-format



¹<http://yann.lecun.com/exdb/mnist/>

Tasks

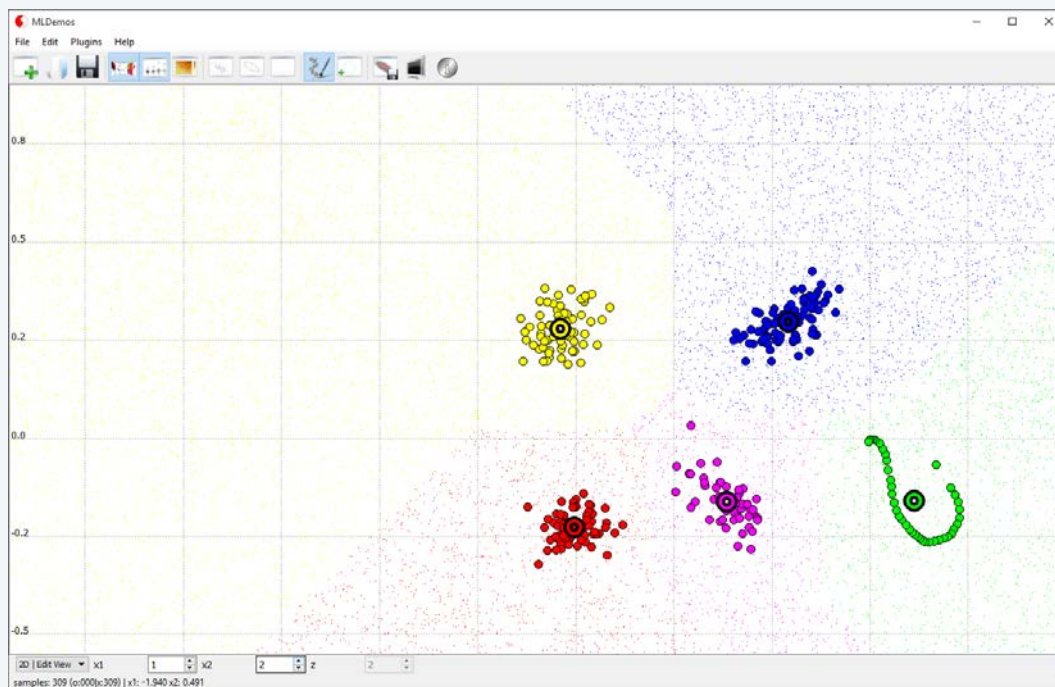
- Implement **Global K-Means** (fully, no libraries!)
- Cluster training set
- Cluster validation with ≥ 2 *methods*
 - C-Index
 - Goodman-Kruskal-Index
 - Dunn-Index
 - Davis-Bouldin-Index

Expected Output

- Source Code of your implementation
- Validation Values for $K = \{5, 7, 9, 10, 12, 15\}$

<http://mldemos.b4silio.com>

Play with machine learning algorithms





Questions?

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