[Lab] Gaussian Discriminative Analysis (GDA)

Jae Yun JUN KIM*

October 8, 2019

Due: Before the next lab session.
Evaluation: Interrogation during the next lab session about:

- code (in group of up to 3 people)

- (theoretical, practical) questions (individual)

Remark:

- Only groups of two/three people accepted. Forbidden groups of larger number of people.

- No late homework will be accepted.

- No plagiarism. If plagiarism happens, both the "lender" and the "borrower" will have a zero.

- Code yourself from scratch. No homework will be considered if you solve the problem using any ML library.

- Do thoroughly all the demanded tasks.

- Study the theory for the interrogation.

1 Tasks

1. Download the *data.csv* file which contains one hundred of examples with two features and the corresponding label.

2. Read the data file, considering 80% of data as the training set and the rest for the test set.

3. Solve the classification problem using both methods that you learned in class (the training part):

   - Logistic regression (an example of discriminative models)
   - Gaussian Discriminant Analysis (an example of generative models)

4. Compare the results of training with the two methods.

5. Test the optimized parameters with the test data

*ECE Paris Graduate School of Engineering, 37 quai de Grenelle 75015 Paris, France; jae-yun.jun-kim@ece.fr