

INF519 Machine Learning 2: Homework 3

Gaussian Mixture Model (GMM)

Jae Yun JUN KIM*

October 13, 2017

Evaluation: Upload your report and python script(s) (in group of up to 3 people) to the course website available in the campus.ece.fr.

Due: Thursday October 19, till 23h55m

Remark:

- No late homework will be accepted.
 - No plagiarism. If plagiarism happens, both the “lender” and the “borrower” will have a zero.
-

1 Tasks

1. Implement yourself the GMM algorithm for **Example 1** (density estimation for a Gaussian mixture) given in the **Practice 3** document.
2. Show that you can obtain the same (or very similar) results as those that can be obtained using the GMM function implemented in the `sklearn` library.

2 Deliverables

1. A brief report that contains:
 - Description of the problem
 - Methods
 - Results
 - Discussion on the results
2. Python script(s).
3. Data files.

Important Note: Send these files zipped with your names as follows:

inf519_2017_hw3_studentsNames.zip

*ECE Paris Graduate School of Engineering, 37 quai de Grenelle CS71520 75 725 Paris 15, France; jae-yun.jun-kim@ece.fr