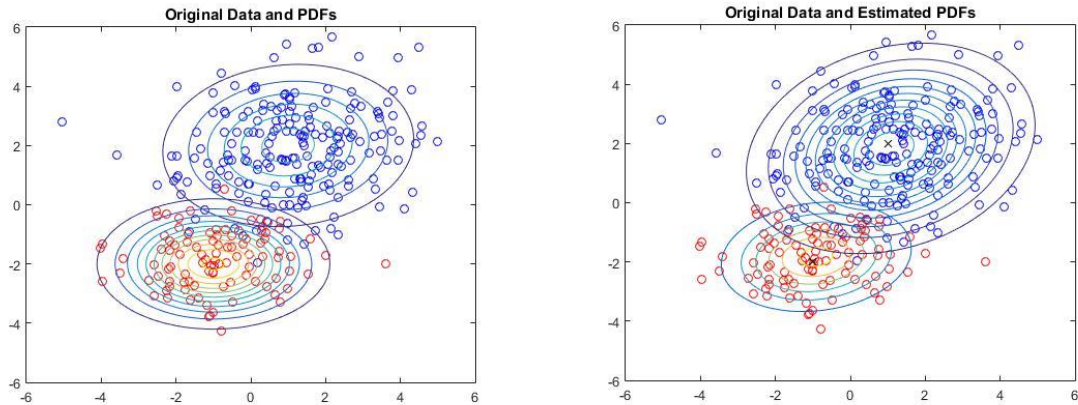


4105109 Computer Vision
Assignment #2 – Image Segmentation by Gaussian Mixture Model

Deadline : 11/19(Thu) 11:59 p.m.



1. Trace the matlab code of Gaussian Mixture Model. Write your report:
 - Part 1: Trace the code to understand how EM algorithm works for GMM ([GMM_Examples_v2014_08_04: GMMExample_2D.m](#)). Get to know each parameter in this method and each variable in this code. Write detailed **program comments** to explain **each line** (what it calculates? how it calculates?). Indicate the **parameter update equations** in EM algorithm specifically.
2. Use two Shiba dog images for segmentation.
 - Training 3, 5, 10 Gaussian mixtures models. Perform image segmentation for two Shiba dog images.
 - Compare the results and discuss how to obtain better segmentation maps.



Note:

- Hand in the matlab codes, GMM code with comments and the report on E-Course.
- Assignment format
 - Zip all your files into a single one and upload it to the E-Course website.
 - Please format the file name as:
Student ID_proj2_verNo
ex : 602410143_proj2_v1