

In The Name of Allah
Pattern Recognition (Autumn 2018)

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Practical Exercise#1: Lecture2_Review Probability Statistics

Due Date: 96.07.20

1. With the help of two given covariance matrixes, generate 1000 samples data for each them and plot them on separate figure.

a. $\Sigma = \begin{bmatrix} 1 & 0 \\ 0 & 1 \end{bmatrix}$ b. $\Sigma = \begin{bmatrix} 1 & 0.9 \\ 0.9 & 1 \end{bmatrix}$

2. Calculate covariance matrixes for two data that generate in previous part. Note that don't use Python/Matlab function.
3. Compare the part1 covariance matrix with the part2 covariance matrix.

Note:

- Prepare a report in PDF format including the figures, answer to the questions and discussions mentioned in the homework.
- Put your report and your codes within a folder named as "YourNameYourFamily-Practical"+ "Exercise Number".
(Note that your code is needed to be self-comment)
- Submit all things in a zipped folder.

Good Luck