

IT 542: Pattern Recognition and Machine Learning

Assignment 1

- (1) Draw 100 samples from uni-variate Normal distribution, plot its histogram. Compute pdf for uni-variate normal distribution and compare it with histogram. Repeat experiment with 500, 1000 data points.
- (2) Draw 100 samples from bi-variate Normal distribution. Repeat experiment 1.
- (3) Do following
 - a. Implement central limit theorem.
 - b. Draw 12 samples from $\text{Uni}[0,1]$ as a sample population and perform CLT. Observe the distribution of sample means.
- (4) Use Box-Muller method to achieve Normal distribution.