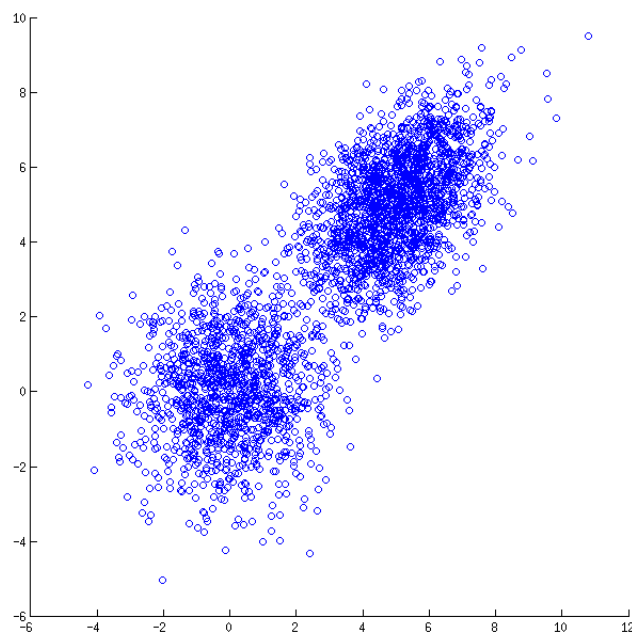


CS663 Assignment-5 Question-1 Report

KOTWAL ALANKAR SHASHIKANT — 12D070010

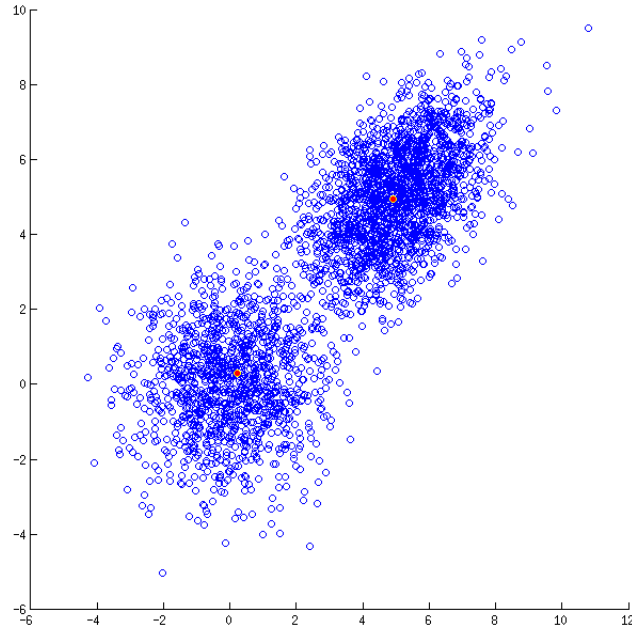
October 31, 2014

The generated scatter-plot is shown below:



The scale is equal for both axes. The blob with center $(0,0)$ is circular because the x and y coordinates are uncorrelated. On the other hand, the other blob is elongated along $y = x$ because of the non-diagonal elements in the covariance matrix.

After mean-shift, the new points are marked in red on the same plot:



For the 3000 sample points in the given distribution, and for a minimum movement of 0.0001 between iterations, the minimum number of convergence steps is 6. The maximum is 28, and the average is 14.47.