



of y .

- Write matlab codes to generate mixtures of samples from twenty five normal or uniform pdfs whose means are rows. Plot generated data.
- Draw a flow chart to illustrate an advanced clustering approach, which is based on expectation maximization and quantization maximization.
- Write matlab codes to implement your flow chart. Test your matlab codes with 25-center data.
- Give details of overlapping memberships according to the following assumption.

$$g_j[i] \propto \exp(-\beta d_{ij})$$

$$\sum_j g_j[i] = 1$$

- Find centers to minimize the following criterion.

$$E =$$

$$\frac{1}{N} \sum_i \sum_k g_k[i] \|x_i - y_k\|^2$$