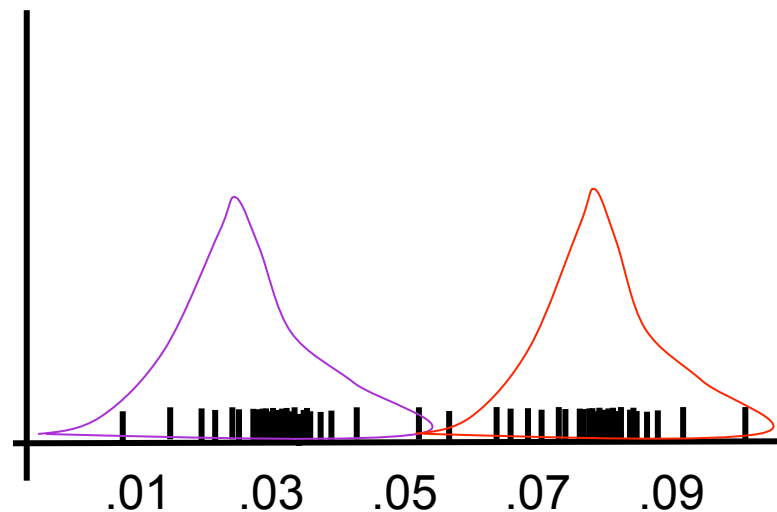


Consider:

- 1D data
- Mixture of $k=2$ Gaussians
- Variances fixed to $\sigma=1$
- Distribution over classes is uniform
- Just need to estimate μ_1 and μ_2



$$\prod_{j=1}^m \sum_{k=1}^K P(x, Y_j = k) \propto \prod_{j=1}^m \sum_{k=1}^{K=2} \exp\left[-\frac{1}{2\sigma^2} \|x - \mu_k\|^2\right] P(Y_j = k)$$