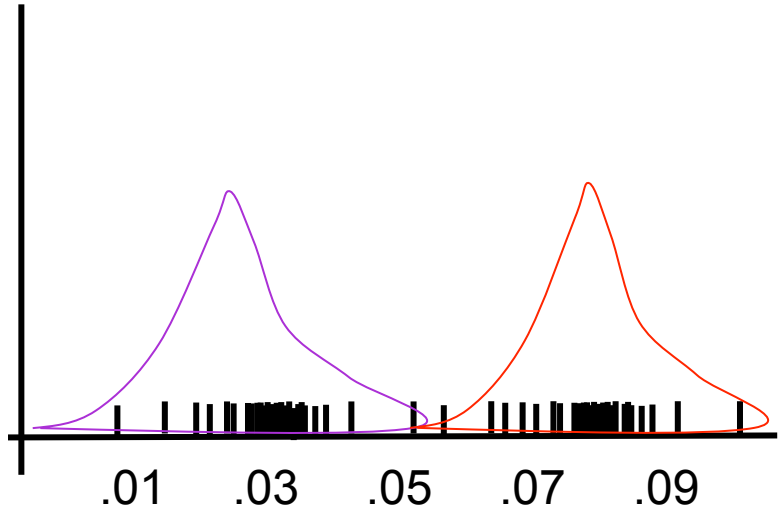
# Consider:

- 1D data, m points
- Mixture of k=2 Gaussians
- Variances fixed to σ=1
- Dist'n over classes is uniform
- Need to estimate $\mu_1$ and $\mu_2$




$$\prod_{j=1}^{n}\sum_{i=1}^{k} P(X = x^j, Y = i) \propto \prod_{j=1}^{n}\sum_{i=1}^{k} \exp\left(-\frac{1}{2\sigma^2}(x^j - \mu_i)^2\right)$$