

Homework 3

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1 EM Algorithm

1.1

The distribution the samples X_i are drawn from:

$$P_M(X) = \pi \frac{\mu_0^X e^{-\mu_0}}{X!} + (1 - \pi) \frac{\mu_1^X e^{-\mu_1}}{X!}$$

The observation vector then, is:

$$X = (X_1, X_2, \dots, X_n)'$$

1.2