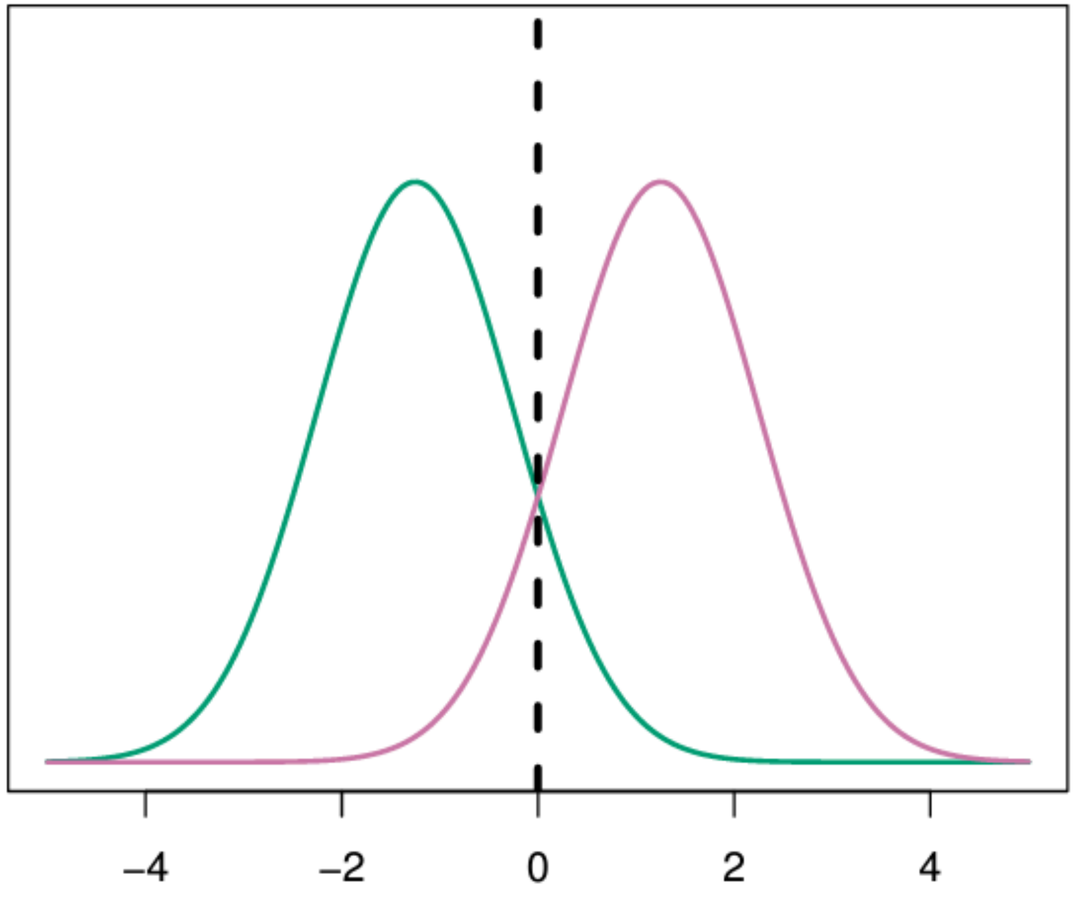
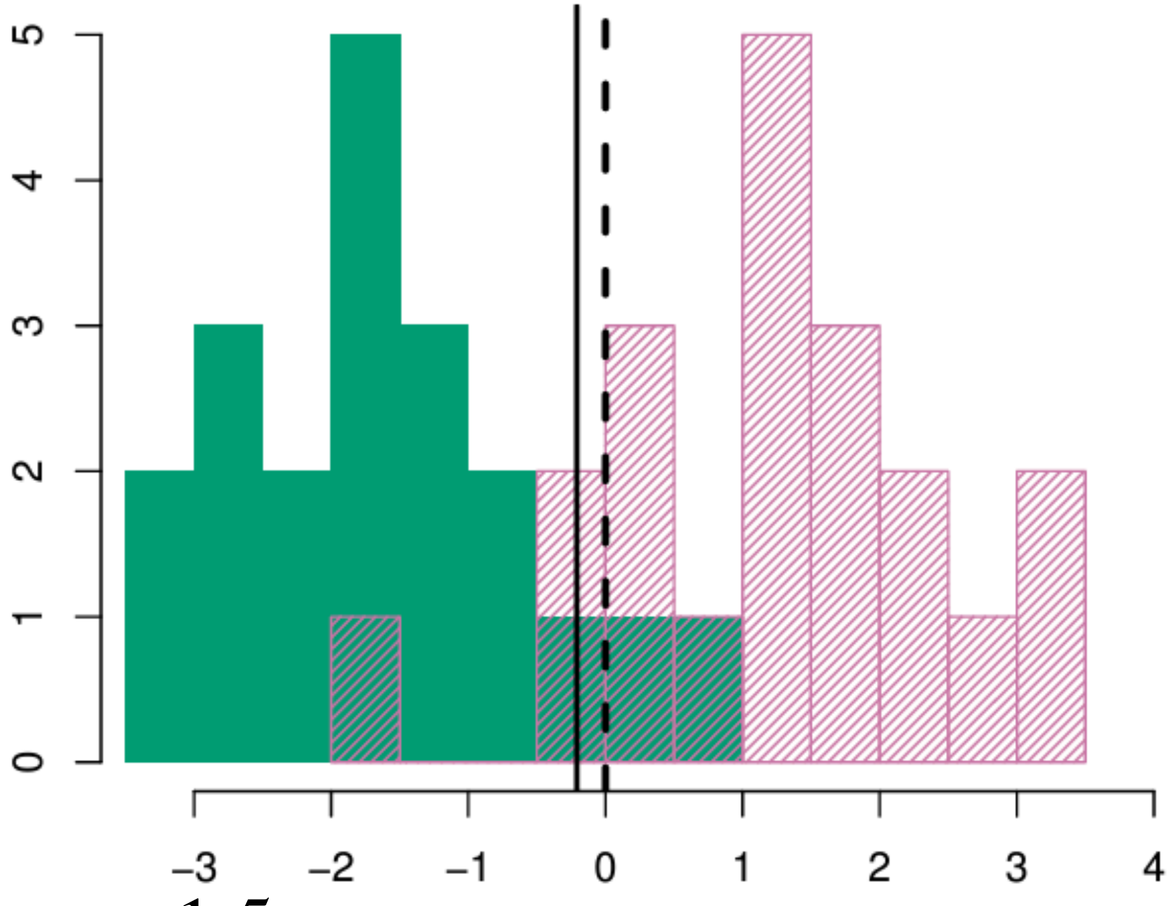
Linear Discriminant Analysis (LDA)



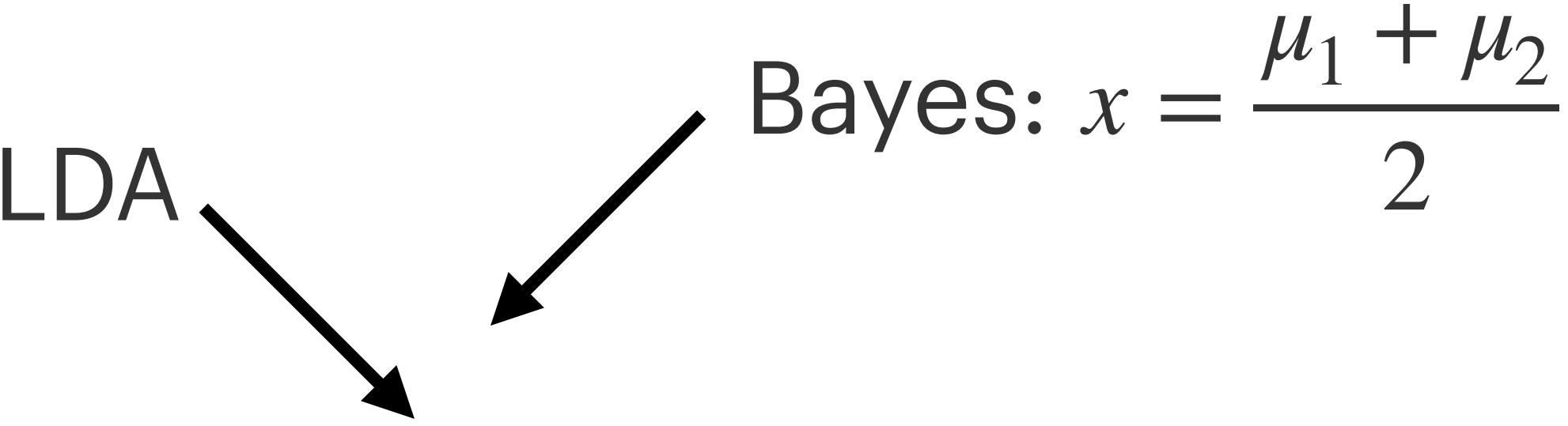


$$\mu_1 = -1.5, \mu_2 = 1.5,$$

$$\sigma_1^2 = \sigma_2^2 = 1,\ \pi_1 = \pi_2 = 0.5$$

- typically we don’t know these parameters

- in that case, we estimate them and plug them into the rule


LDA
Bayes: $x = \frac{\mu_1 + \mu_2}{2}$

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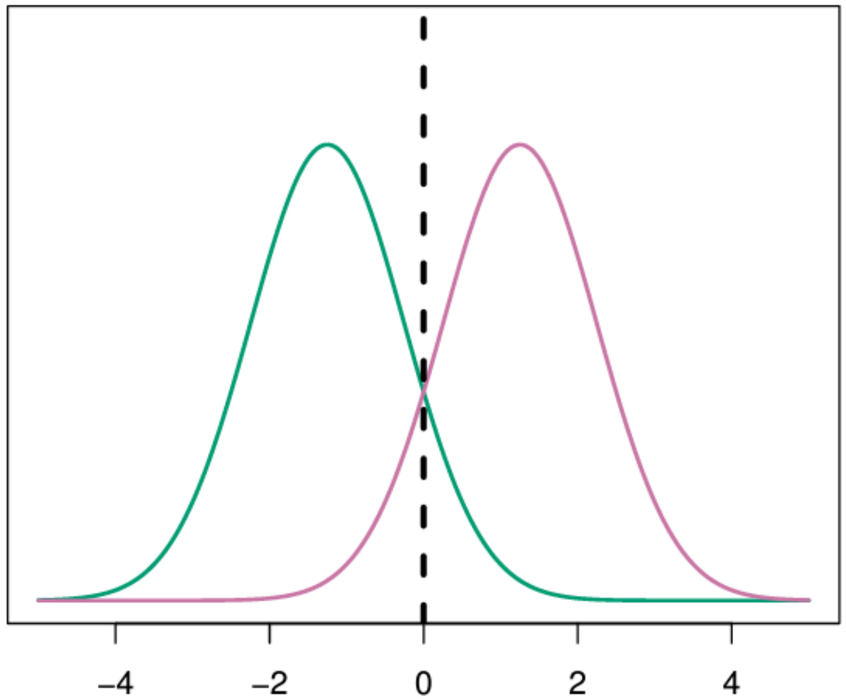

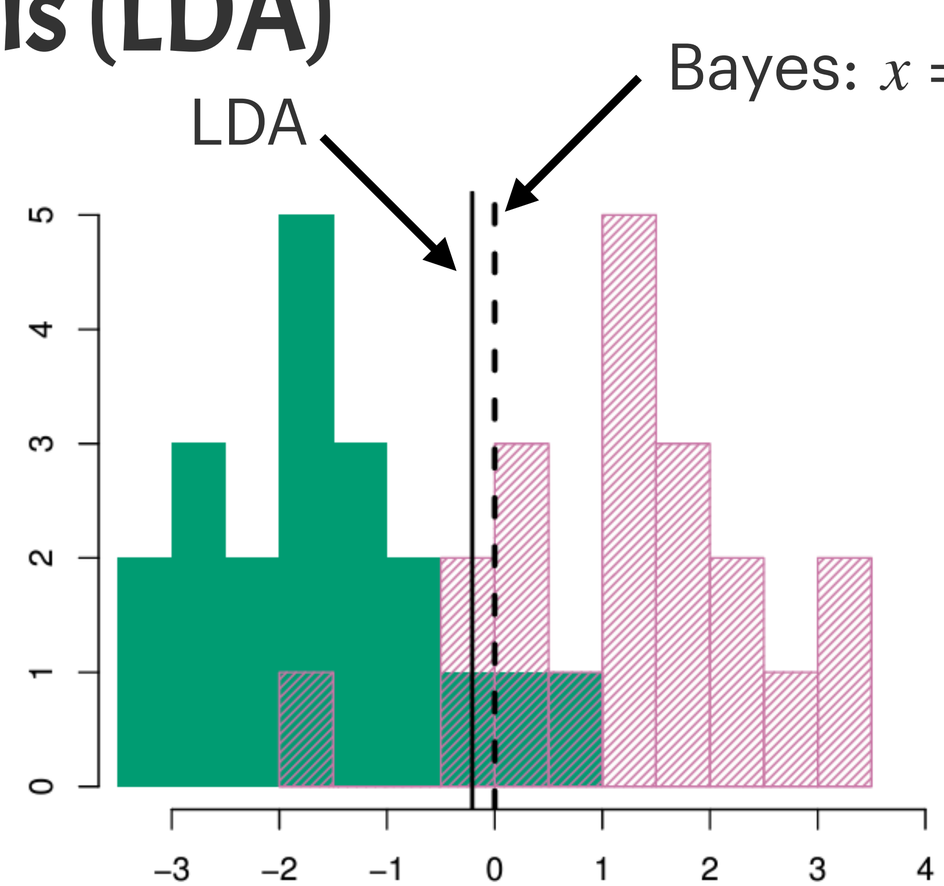

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LDA with three classes