How much computing time did the 10-fold cross-validation take for the digits-recognition application (on my laptop)?

- A < 1 second
- B 1–10 seconds
- C 10 seconds to 1 minute
- D 1–10 minutes
- E > 10 minutes

We have a different cross-validated misclassification rate! Why?

A There is randomness in the Bernoulli statistical model

B There was a different random sample of 400 digits

C Professor Welch changed the model

D The GLM function `gam` converged to different solutions

E The 10 folds in 10-fold cross-validation are randomly chosen.

Class 8 Clicker Question 3

The lines shown are contours of constant $\hat{p}(\mathbf{x})$. e.g., the middle line shows where $\hat{p}(\mathbf{x}) = 0.5$ (the decision boundary).

Why is the decision boundary linear?

A Because $p(\mathbf{x})$ is a linear function of of x_1 and x_2

B Because $p(\mathbf{x})$ is a linear function of the parameters β_j

C Because the linear predictor $\eta(\mathbf{x})$ is a linear function of x_1 and x_2

D Because the linear predictor $\eta(\mathbf{x})$ is a linear function of the parameters β_j

E Because it is called a generalized linear model.

Why are contours of constant $\hat{p}(\mathbf{x})$ linear?

A Because of the properties of the multivariate normal distribution

B Because $p(\mathbf{x})$ is a linear function of the parameters $\mathbf{a}$

C Because $p(\mathbf{x})$ is a linear function of the parameter b

D Because $p(\mathbf{x})$ a linear function of the parameters β_j

E Because it is called linear discriminant analysis.