



# **Foundations of Machine Learning (CS 725)**

## **FALL 2024**

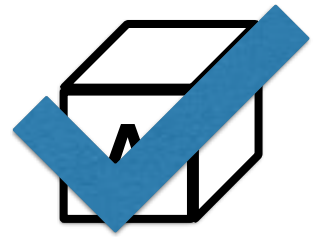
### **Lecture 8:**

- Decision Tree Classifiers

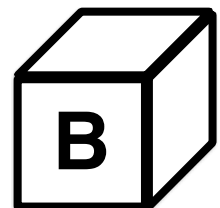
Instructor: Preethi Jyothi

# Question 1

Consider two binary logistic regression classifiers C and D that are trained using gradient descent and a very small learning rate. Despite C and D starting with different initialization points, they are likely to converge to the same solution. (True or False)?



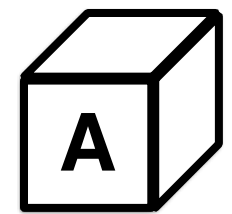
True



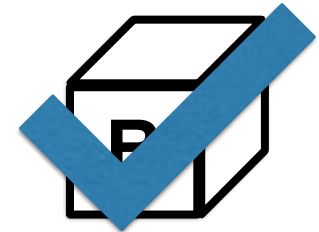
False

## Question 2

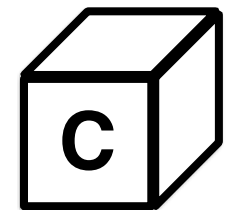
Consider a point that is far away from the decision boundary of a logistic regression classifier and is correctly classified. What will happen to the decision boundary if this point is removed from the training set and the logistic regression classifier is retrained?



Decision boundary stays the same



Decision boundary changes



Cannot say