***Ensemble of decision trees: XGBoost***

***Quiz:***

1. **Based on the plot, select the learning rate that gives the best performance on the validation set**

0.1

0.00001

0.01

2. **True or False: The following figure shows the decision boudaries of an XGBClassifier with a learning rate of 0.1**

True

False

3. **True or False: The following figure shows the decision boudaries of an XGBClassifier with a learning rate of 0.01**

True

False

4. **Which of the following statements about learning rate and overfitting in XGBoost is true?**

The optimal learning rate for a given problem depends on the complexity of the model.

Decreasing the learning rate can lead to underfitting.

Increasing the learning rate can lead to overfitting.

The optimal learning rate for a given problem depends on the size of the dataset.