

Recap

Quiz, 6 questions

1
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1.

What back propagation is usually used for in neural networks?

- ☒ To calculate gradient of the loss function with respect to the parameters of the network
 - ☐ Select gradient update direction by flipping a coin
 - ☐ To propagate signal through network from input to output only
 - ☐ Make several random perturbations of parameters and go back to the best one
-

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2.

Suppose we've trained a RandomForest model with 100 trees. Consider two cases:

1. We drop the first tree in the model
2. We drop the last tree in the model

We then compare models performance *on the train set*. Select the right answer.

- ☐ In the *case 1* performance **will drop less** than in the *case 2*
 - ☐ In the *case 1* performance **will drop more** than in the *case 2*
 - ☒ In the *case 1* performance **will be roughly the same** as in the *case 2*
-

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3.

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Suppose we've trained a GBDT model with 100 trees with a fairly large learning rate. Consider two cases:

1. We drop the first tree in the model
2. We drop the last tree in the model

We then compare models performance *on the train set*. Select the right answer.

- ☐ In the *case 1* performance **will be roughly the same** as in the *case 2*
 - ☒ In the *case 1* performance **will drop more** than in the *case 2*
 - ☐ In the *case 1* performance **will drop less** than in the *case 2*
-

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4.
Consider two cases:

1. We fit two RandomForestClassifiers 500 trees each and average their predicted probabilities on the test set.
2. We fit a RandomForestClassifier with 1000 trees and use it to get test set probabilities.

All hyperparameters except number of trees are the same for all models.

Select the right answer.

- ☐ The quality of predictions in the *case 1* **will be higher** than the quality of the predictions in the *case 2*
 - ☒ The quality of predictions in the *case 1* **will be roughly the same** as the quality of the predictions in the *case 2*
 - ☐ The quality of predictions in the *case 1* **will be lower** than the quality of the predictions in the *case 2*
-

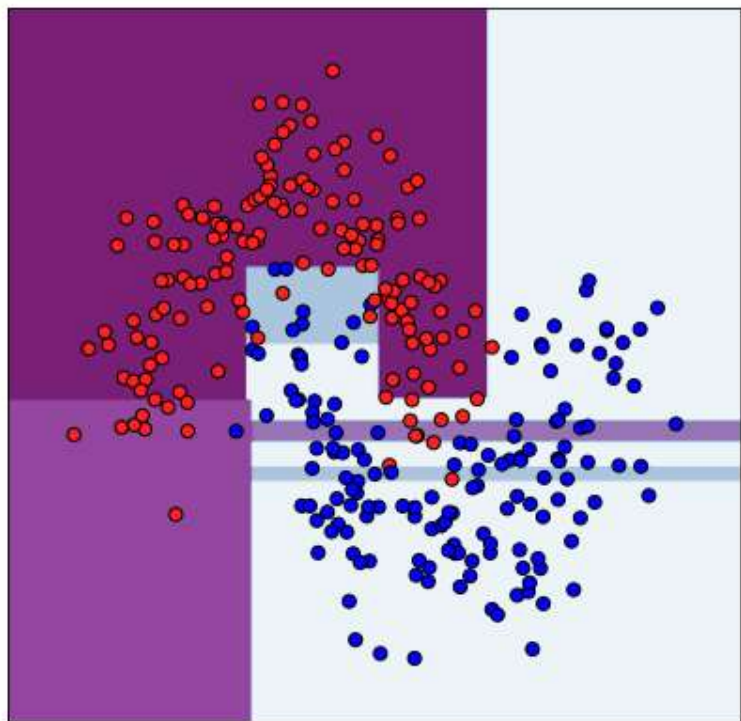
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5.

What model was most probably used to produce such decision surface? Color (from white to purple) shows predicted probability for a point to be of class "red".

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- ☒ Decision Tree
- ☐ Linear model
- ☐ Random Forest
- ☐ k-NN

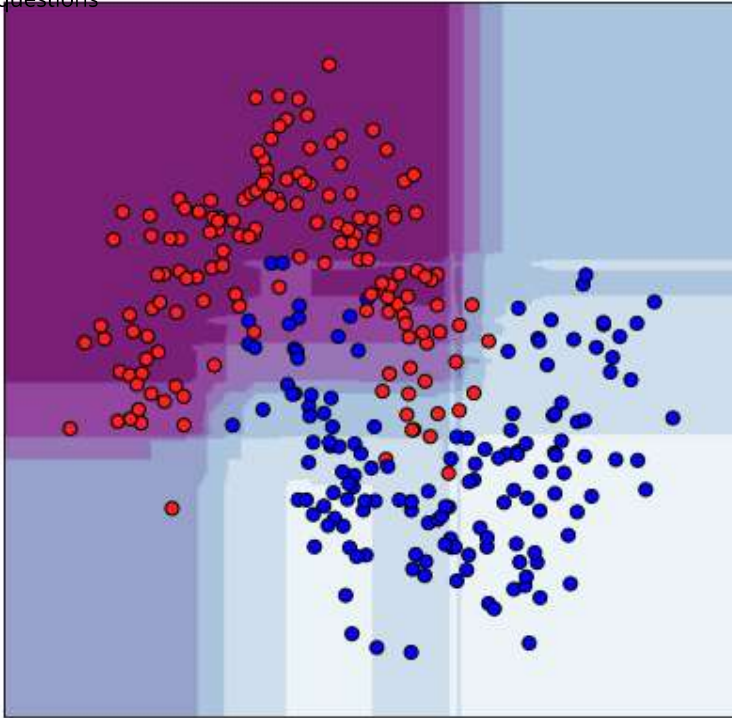
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6.

What model was most probably used to produce such decision surface?

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- ☒ Random Forest
- ☐ Linear model
- ☐ Decision Tree
- ☐ k-NN

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