

1	
point	

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

1 point

2



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

10 **Yiv**e ପେମଧ୍ୟ ହୋଇ 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*

1 point

Recap

3.

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 drop less** than in the *case 2*
- 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*





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 <i>case 1</i> <b>will be higher</b> than the quality of the predictions in the <i>case 2</i>
The quality of predictions in the case 1 will be lower than the quality of the predictions in the case 2
The quality of predictions in the <i>case 1</i> <b>will be roughly the same</b> as the quality of the predictions in the <i>case 2</i>

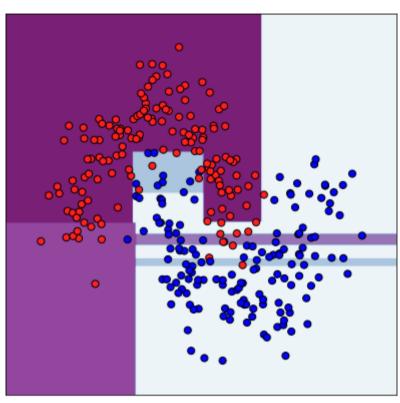
1 point

5.



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

Quiz, 6 questions



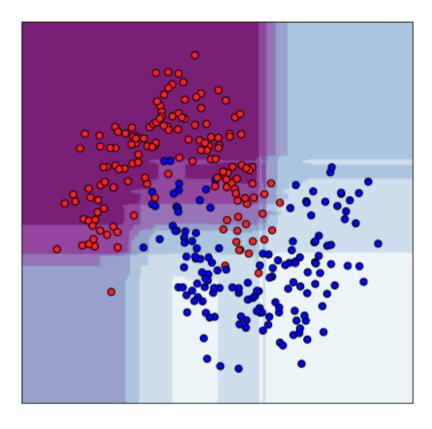
- Decision Tree
- Linear model
- Random Forest
- k-NN





6.

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



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



Quiz, 6 questions

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