Week 6 Quiz

1. In machine learning, what is an ensemble method?

Answer:

Ensemble method in ML is a technique that combines multiple base models in order to produce one optimal model. Let’s take an example of Decision tree, rather than predicting and relying on only one decision tree ensemble method take sample of random decision tree and produce aggregated result from random generate sample decision trees

1. Explain one of the two ways a random forest model uses randomness.

Answer:

Random forest uses randomness to the model while making the tree. Instead of searching the important feature from the node it searches the best feature among random subset of features. The wide diversity in the process confirms the better accuracy of the model

1. Explain what the python pickle module is used for.

Answer:

Python pickle model is used for serialization and deserialization the python object structure. Any objects made within the python can be pickled and saved into the local disk. It serializes the object before writing the objects.

1. How are Random Forests better than Decision Trees (target a two sentence answer)?

Answer:

Random Forest has a higher training time than a single decision tree and it combines multiple models to predict rather than just depending on single model.

1. What is one way that a Decision Tree is superior to a Random Forest?

Answer:

The one way that a Decision Tree is superior to a Random Forest is it is easy to interpret and it is faster to train than random forest.