Assignment 12

Due on 2016-10-23, 23:59 IST.

The assignment is about machine learning. The assignment consists of 10 questions. Each question is worth 1 point.

1. A perceptron is a simple linear classifier. It takes an input vector and predicts a binary class label based on a threshold.

2. A decision tree is a tree-like model used for decision-making. It uses a series of questions to make a decision.

3. A neural network is a complex model that consists of interconnected nodes (neurons) that process information in a hierarchical manner.

4. A support vector machine (SVM) is a classification algorithm that finds a hyperplane in the space of input features that distinctly separates the data points of different classes.

5. A convolutional neural network (CNN) is a type of neural network that is widely used in image and video recognition.

6. A recurrent neural network (RNN) is a type of neural network that is designed to handle sequential data, such as time series or natural language.

7. A long short-term memory (LSTM) network is a type of RNN that is designed to capture long-term dependencies in the data.

8. A deep belief network (DBN) is a type of unsupervised neural network that is trained in a greedy layer-wise fashion.

9. A convolutional layer is a layer in a neural network that applies a set of filters to the input data to extract features.

10. A pooling layer is a layer in a neural network that reduces the dimensionality of the input data by downsampling the feature maps.