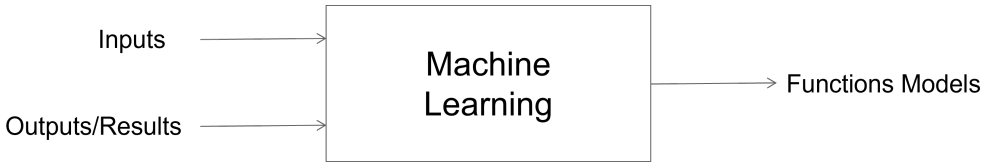
Course: Machine Learning Techniques
Week 1: Practice Questions

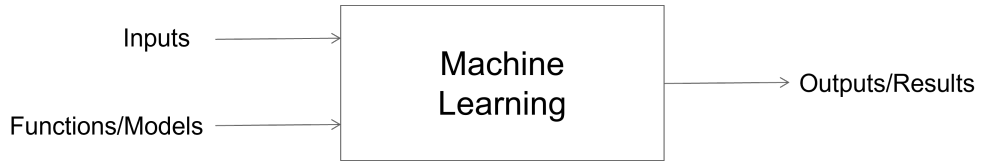
Practice Questions

1. (1 point) (Multiple select) Which of the following block diagrams is/are incorrect?

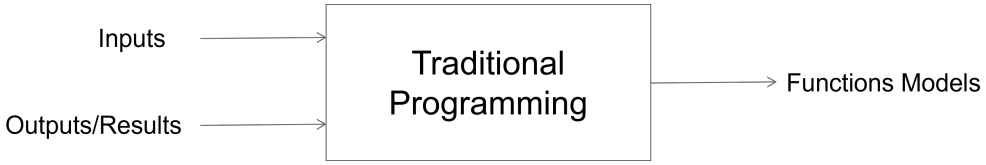
A.



B.



C.



D.

Answer: C,D

2. (1 point) Consider the following characteristics
   1. High training loss
   2. High validation loss
   3. Low training loss
   4. Low validation loss

   Which of the above characterises overfitting?

   A. 1 and 2

B. 2 and 3

C. 3 and 4

D. 1 and 4

Answer: B

3. (1 point) (Multiple select) Which of the following is/are not a supervised learning algorithm?

   A. Logistic regression

   B. Neural network

   C. K-means clustering

   D. Decision trees

   Answer: C

4. (1 point) (Multiple select) Which of the following label(s) can be considered continuous?

   A. Rainfall prediction.

   B. Wind velocity in a cyclone.

   C. Pitch of a sound wave.

   D. Intensity of light.

   Answer: B,C,D

5. (1 point) (Multiple select) Which of the following are examples of discriminative models?

   A. Logistic Regression

   B. SVM

   C. Decision trees

   D. Neural networks

   Answer: A,B,C,D

6. (1 point) The area under curve of precision recall curve for an ideal classifier is

   A. 1

   B. 0

   C. 0.5

D. ∞

Answer: A

7. (1 point) A label which is actually false and is predicted true by the model in a classification problem is called

   A. True positive

   B. False positive

   C. True negative

   D. False negative

   Answer: B

8. (1 point) During training of an ML model

   A. Training loss should decrease and test loss should increase

   B. Training loss should increase and test loss should decrease

   C. Both training and test loss should decrease

   D. Both training and test loss should increase

   Answer: C

Connected Questions

Consider the following confusion matrix

		Predicted	
		FALSE	TRUE
Actual	FALSE	42	28
	TRUE	38	62

9. (points) Precision of the classification model represented by above confusion matrix is

   Answer: 0.688

10. (points) Recall of the classification model represented by above confusion matrix is

    Answer: 0.620