GTC Internship 2025 ML Track - Quiz 1: Intro to ML

Question 1

What is a "model" in machine learning?

A) A smaller representation of the thing you're studying

B) A mathematical relationship derived from data that an ML system uses to make predictions

C) A piece of computer hardware

D) A dataset with features and labels

Question 2

Which of the following is a regression problem?

A) Predicting whether an email is spam or not

B) Predicting the price of a house based on square footage and location

C) Classifying a photo as either a cat or a dog

D) Clustering customers into groups based on purchase history

Question 3

Classification differs from regression in that:

A) Classification predicts numeric values, regression predicts categories

B) Classification predicts categories, regression predicts numeric values

C) Regression uses labels, classification does not

D) Regression requires clustering

Question 4

If you wanted to use ML to predict energy usage for commercial buildings, what type of model would you use?

A) Classification

B) Regression

C) Unsupervised learning

D) Reinforcement learning

Question 5

What distinguishes a supervised approach from an unsupervised approach?

A) An unsupervised approach knows how to label clusters of data

B) A supervised approach is given data that contains the correct answer

C) A supervised approach typically uses clustering

D) An unsupervised approach uses rewards and penalties

Question 6

Which ML technique trains by receiving rewards or penalties for its actions?

A) Supervised learning

B) Unsupervised learning

C) Reinforcement learning

D) Generative AI

Question 7

Which of the following is an example of a binary classification problem?

A) Predicting the next word in a sentence

B) Predicting rain or no rain

C) Predicting whether a picture is a cat, a dog, or a horse

D) Grouping customers based on buying behavior

Question 8

In unsupervised learning, the most common technique for finding structure in data is:

A) Regression

B) Classification

C) Clustering

D) Reinforcement

Question 9

Which of these is an example of generative AI?

A) Predicting the likelihood of rainfall tomorrow

B) Grouping weather data into seasons

C) Creating a unique image of an alien octopus reading a newspaper

D) Predicting the price of a car based on mileage

Question 10

Generative AI models are typically trained first using:

A) Reinforcement learning

B) Unsupervised learning

C) Classification

D) Regression

Question 11

In a dataset, what are the features?

A) The values that a model predicts

B) The answers the model tries to predict

C) The input variables used to predict the label

D) The loss function of the model

Question 12

What characteristics make an ideal dataset for ML?

A) Small size, low diversity

B) Small size, high diversity

C) Large size, low diversity

D) Large size, high diversity

Question 13

Why does a model need to be trained before it can make predictions?

A) So it won't require data to make predictions

B) To learn the mathematical relationship between the features and the label in a dataset

C) Because models are stored on specific computers

D) To increase dataset diversity

Question 14

During training, what is the difference between the predicted value and the actual value called?

A) Accuracy

B) Loss

C) Diversity

D) Inference

Question 15

Once a trained model is used to make predictions on new, unlabeled data, this process is called:

A) Evaluation

B) Training

C) Inference

D) Regression