Quiz for Class 4-Module 1

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1. What is the primary difference between data drift and concept drift?

a) Data drift affects the input features, while concept drift affects the target variable

b) Data drift is sudden, while concept drift is gradual

c) Data drift changes the distribution of input features, while concept drift changes the relationship between features and target

d) Data drift only occurs in supervised learning, while concept drift occurs in unsupervised learning

2. Which of the following is an example of concept drift?

a) A change in the average age of customers in a recommendation system

b) A shift in spam email tactics, making old spam detection rules less effective

c) An increase in the number of features available for prediction

d) A decrease in the overall volume of data being processed

3. What statistical test is commonly used to detect data drift between two distributions?

a) T-test

b) Chi-squared test

c) Kolmogorov-Smirnov test

d) ANOVA

4. In the context of drift detection, what does KL divergence measure?

a) The difference in mean values between two distributions

b) The similarity between two probability distributions

c) The rate of change in a time series

d) The correlation between input features

5. Which of the following is NOT a common strategy for handling drift in ML systems?

a) Periodic retraining of the model

b) Implementing adaptive learning algorithms

c) Increasing the complexity of the model architecture

d) Using ensemble methods with dynamic weighting

6. What is a potential challenge when implementing drift detection in a production ML system?

a) Lack of historical data

b) Difficulty in distinguishing between different types of drift

c) Inability to access the model's predictions

d) Excessive computational resources required for model training

7. In the context of concept drift, what does a "gradual drift" refer to?

a) A slow change in the relationship between features and target over time

b) A sudden, but small change in data distribution

c) A drift that only affects a small subset of features

d) A change that reverts back to the original state after some time

▼ Answers:

1. c) Data drift changes the distribution of input features, while concept drift changes the relationship between features and target

2. b) A shift in spam email tactics, making old spam detection rules less effective

3. c) Kolmogorov-Smirnov test

4. b) The similarity between two probability distributions

5. c) Increasing the complexity of the model architecture

6. b) Difficulty in distinguishing between different types of drift

7. a) A slow change in the relationship between features and target over time