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Practice Materials & Tests

DEMO VERSION

ISTQB

CT-AI Exam

ISTQB Certified Tester AI Testing Exam



Exam Latest Version: 10.0



Question 1. (Single Select)

Data used for an object detection ML system was found to have been labelled incorrectly in many cases.

Which ONE of the following options is most likely the reason for this problem?

SELECT ONE OPTION

- A: Security issues
- B: Accuracy issues
- C: Privacy issues
- D: Bias issues

Correct Answer: B

Explanation:

The question refers to a problem where data used for an object detection ML system was labelled incorrectly. This issue is most closely related to "accuracy issues." Here's a detailed explanation:

Accuracy Issues: The primary goal of labeling data in machine learning is to ensure that the model can accurately learn and make predictions based on the given labels. Incorrectly labeled data directly impacts the model's accuracy, leading to poor performance because the model learns incorrect patterns.

Why Not Other Options:

Security Issues: This pertains to data breaches or unauthorized access, which is not relevant to the problem of incorrect data labeling.

Privacy Issues: This concerns the protection of personal data and is not related to the accuracy of data labeling.

Bias Issues: While bias in data can affect model performance, it specifically refers to systematic errors or prejudices in the data rather than outright incorrect labeling.

References: This explanation is consistent with the concepts covered in the ISTQB CT-AI

Question 2. (Multi Select)

Which two test procedures are BEST suited for CleverPropose system testing?

Choose TWO options (2 out of 5)

- A: Back-to-back testing
- B: Adversarial testing
- C: Metamorphic testing
- D: Exploratory data analysis
- E: Pairwise testing

Correct Answer: A, C

Explanation:

The ISTQB CT-AI syllabus explains that AI-based decision-support systems benefit strongly from back-to-back testing and metamorphic testing when oracle problems exist or when limited regression tests are available. In this scenario, CleverPropose replaces an older advisory system. Back-to-back testing (Option A) is ideal because the outputs of the existing conventional system can serve as a reference, enabling comparison against the new AI system. This is exactly what the syllabus recommends when AI is replacing a traditional deterministic system.

Metamorphic testing (Option C) is also appropriate, as stated in Section 4.6 – Metamorphic Relations. With limited regression tests and complex decision logic, testers can define metamorphic relations such as “if customer income increases, risk rating should not worsen.” These relations allow validation even when exact expected outputs are unavailable.

Exploratory data analysis (Option D) is not a system testing technique. Pairwise testing (Option E) is not well suited for complex AI-based financial advice systems. Adversarial testing (Option B) is more relevant for security-critical or robustness evaluation, not primary system testing for advisory tools.

Thus, A and C are the correct and syllabus-supported choices.

Question 3. (Single Select)

Which ONE of the following approaches to labelling requires the least time and effort?

SELECT ONE OPTION

- A: Outsourced
- B: Pre-labeled dataset
- C: Internal
- D: AI-Assisted

Correct Answer: B

Explanation:

• Labelling Approaches: Among the options provided, pre-labeled dataset requires the least time and effort because the data has already been labeled, eliminating the need for further manual or automated labeling efforts.

• Reference: ISTQB_CT-AI_Syllabus_v1.0, Section 4.5 Data Labeling, which discusses various approaches to data labeling, including pre-labeled datasets, and their associated time and effort requirements.

Question 4. (Single Select)

In a certain coffee producing region of Colombia, there have been some severe weather storms, resulting in massive losses in production. This caused a massive drop in stock price of coffee.

Which ONE of the following types of testing SHOULD be performed for a machine learning model for stock-price prediction to detect influence of such phenomenon as above on price of coffee stock.

SELECT ONE OPTION

- A: Testing for accuracy
- B: Testing for bias
- C: Testing for concept drift
- D: Testing for security

Correct Answer: C

Explanation:

• **Type of Testing for Stock-Price Prediction Models:** Concept drift is a change in the statistical properties of the target variable over time. Severe weather storms causing massive losses in coffee production and affecting stock prices would require testing for concept drift to ensure that the model adapts to new patterns in data over time.

• **Reference:** ISTQB_CT-AI_Syllabus_v1.0, Section 7.6 Testing for Concept Drift, which discusses the need to test for concept drift in models that might be affected by changes in the data.

Question 5. (Single Select)

Which ONE of the following types of coverage SHOULD be used if test cases need to cause each neuron to achieve both positive and negative activation values?

SELECT ONE OPTION

- A: Value coverage
- B: Threshold coverage
- C: Sign change coverage
- D: Neuron coverage

Correct Answer: C

Explanation:

• **Coverage for Neuron Activation Values:** Sign change coverage is a type of coverage where test cases cause each neuron to achieve both positive and negative activation values. This type of coverage ensures that the neurons are thoroughly tested under different activation states.

• Reference: ISTQB_CT-AI_Syllabus_v1.0, Section 6.2 Coverage which details different types of coverage measures, including si

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