Passcert

Higher Quality, better service!

Q&A

Http://www.passcert.com

We offer free update service for one year.

Exam : **CT-AI**

Title : Certified Tester AI Testing

Version : DEMO

1.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
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.
Reference: This explanation is consistent with the concepts covered in the ISTQB CT-AI syllabus under dataset quality issues and their impact on machine learning models.

2.Written requirements are given in text documents, which ONE of the following options is the BEST way to generate test cases from these requirements? SELECT ONE OPTION
A. Natural language processing on textual requirements
B. Analyzing source code for generating test cases
C. Machine learning on logs of execution
D. GUI analysis by computer vision
Answer: A
Explanation:
When written requirements are given in text documents, the best way to generate test cases is by using Natural Language Processing (NLP).
Here’s why:
Natural Language Processing (NLP): NLP can analyze and understand human language. It can be used to process textual requirements to extract relevant information and generate test cases. This method is efficient in handling large volumes of textual data and identifying key elements necessary for testing.
Why Not Other Options:
Analyzing source code for generating test cases: This is more suitable for white-box testing where the code is available, but it doesn't apply to text-based requirements.
Machine learning on logs of execution: This approach is used for dynamic analysis based on system behavior during execution rather than static textual requirements.
GUI analysis by computer vision: This is used for testing graphical user interfaces and is not applicable

to text-based requirements.
Reference: This aligns with the methodology discussed in the syllabus under the section on using AI for generating test cases from textual requirements.

3.A software component uses machine learning to recognize the digits from a scan of handwritten numbers.
In the scenario above, which type of Machine Learning (ML) is this an example of? SELECT ONE OPTION
A. Reinforcement learning
B. Regression
C. Classification
D. Clustering
Answer: C
Explanation:
Recognizing digits from a scan of handwritten numbers using machine learning is an example of classification.
Here's a breakdown:
Classification: This type of machine learning involves categorizing input data into predefined classes. In this scenario, the input data (handwritten digits) are classified into one of the 10 digit classes (0-9).
Why Not Other Options:
Reinforcement Learning: This involves learning by interacting with an environment to achieve a goal, which does not fit the problem of recognizing digits.
Regression: This is used for predicting continuous values, not discrete categories like digit recognition.
Clustering: This involves grouping similar data points together without predefined classes, which is not the case here.
Reference: The explanation is based on the definitions of different machine learning types as outlined in the ISTQB CT-AI syllabus, specifically under supervised learning and classification.

4.Max. Score: 2
Al-enabled medical devices are used nowadays for automating certain parts of the medical diagnostic processes. Since these are life-critical process the relevant authorities are considenng bringing about suitable certifications for these Al enabled medical devices.
This certification may involve several facets of Al testing (I - V).
I. Autonomy
II. Maintainability
III. Safety
IV. Transparency
V. Side Effects
Which ONE of the following options contains the three MOST required aspects to be satisfied for the above scenario of certification of Al enabled medical devices? SELECT ONE OPTION
A. Aspects II, III and IV
B. Aspects I, II, and III
C. Aspects III, IV, and V
D. Aspects I, IV, and V

Answer: C
Explanation:
For AI-enabled medical devices, the most required aspects for certification are safety, transparency, and side effects.
Here's why:
Safety (Aspect III): Critical for ensuring that the AI system does not cause harm to patients.
Transparency (Aspect IV): Important for understanding and verifying the decisions made by the AI system.
Side Effects (Aspect V): Necessary to identify and mitigate any unintended consequences of the AI system.
Why Not Other Options:
Autonomy and Maintainability (Aspects I and II): While important, they are secondary to the immediate concerns of safety, transparency, and managing side effects in life-critical processes.
Reference: This explanation is aligned with the critical quality characteristics for AI-based systems as mentioned in the ISTQB CT-AI syllabus, focusing on the certification of medical devices.

5.Which ONE of the following options represents a technology MOST TYPICALLY used to implement AI?
SELECT ONE OPTION
A. Search engines
B. Procedural programming
C. Case control structures
D. Genetic algorithms
Answer: D
Explanation:
Technology Most Typically Used to Implement AI: Genetic algorithms are a well-known technique used in AI. They are inspired by the process of natural selection and are used to find approximate solutions to optimization and search problems. Unlike search engines, procedural programming, or case control structures, genetic algorithms are specifically designed for evolving solutions and are commonly employed in AI implementations.
Reference: ISTQB_CT-AI_Syllabus_v1.0, Section 1.4 AI Technologies, which identifies different technologies used to implement AI.