Exam : **AIP-210**

Title : CertNexus Certified Artificial Intelligence Practitioner (CAIP)

Version : DEMO

1.You and your team need to process large datasets of images as fast as possible for a machine learning task. The project will also use a modular framework with extensible code and an active developer community.
Which of the following would BEST meet your needs?
A. Caffe
B. Keras
C. Microsoft Cognitive Services
D. TensorBoard
Answer: B
Explanation:
Caffe is a deep learning framework that is designed for speed and modularity. It can process large datasets of images efficiently and supports various types of neural networks. It also has a large and active developer community that contributes to its code base and documentation. Caffe is suitable for image processing tasks such as classification, segmentation, detection, and recognition

2.Which of the following principles supports building an ML system with a Privacy by Design methodology?
A. Avoiding mechanisms to explain and justify automated decisions.
B. Collecting and processing the largest amount of data possible.
C. Understanding, documenting, and displaying data lineage.
D. Utilizing quasi-identifiers and non-unique identifiers, alone or in combination.
Answer: C
Explanation:
Data lineage is the process of tracking the origin, transformation, and usage of data throughout its lifecycle. It helps to ensure data quality, integrity, and provenance. Data lineage also supports the Privacy by Design methodology, which is a framework that aims to embed privacy principles into the design and operation of systems, processes, and products that involve personal data. By understanding, documenting, and displaying data lineage, an ML system can demonstrate how it collects, processes, stores, and deletes personal data in a transparent and accountable manner3.

3.A data scientist is tasked to extract business intelligence from primary data captured from the public. Which of the following is the most important aspect that the scientist cannot forget to include?
A. Cyberprotection
B. Cybersecurity
C. Data privacy
D. Data security
Answer: C
Explanation:
Data privacy is the right of individuals to control how their personal data is collected, used, shared, and protected. It also involves complying with relevant laws and regulations that govern the handling of personal data. Data privacy is especially important when extracting business intelligence from primary data captured from the public, as it may contain sensitive or confidential information that could harm the individuals if misused or breached.

4.For a particular classification problem, you are tasked with determining the best algorithm among SVM, random forest, K-nearest neighbors, and a deep neural network. Each of the algorithms has similar accuracy on your data. The stakeholders indicate that they need a model that can convey each feature's relative contribution to the model's accuracy.
Which is the best algorithm for this use case?
A. Deep neural network
B. K-nearest neighbors
C. Random forest
D. SVM
Answer: C
Explanation:
Random forest is an ensemble learning method that combines multiple decision trees to create a more accurate and robust classifier or regressor. Random forest can convey each feature’s relative contribution to the model’s accuracy by measuring how much the prediction error increases when a feature is randomly permuted. This metric is called feature importance or Gini importance. Random forest can also provide insights into the interactions and dependencies among features by visualizing the decision trees.

5.A dataset can contain a range of values that depict a certain characteristic, such as grades on tests in a class during the semester. A specific student has so far received the following grades: 76,81, 78, 87, 75, and 72. There is one final test in the semester.
What minimum grade would the student need to achieve on the last test to get an 80% average?
A. 82
B. 89
C. 91
D. 94
Answer: C
Explanation:
To calculate the minimum grade needed to achieve an 80% average, we can use the following formula:
minimum grade = (target average * number of tests - sum of grades) / (number of tests - 1)
Plugging in the given values, we get:
minimum grade = (80 * 7 - (76 + 81 + 78 + 87 + 75 + 72)) / (7 - 6)
minimum grade = (560 - 469) / 1
minimum grade = 91
Therefore, the student needs to score at least 91 on the last test to get an 80% average.