The Best Oracle 1z0-1122-23 Study Guides and Dumps of 2023 [Q18-Q37

The Best Oracle 1z0-1122-23 Study Guides and Dumps of 2023 Top Oracle 1z0-1122-23 Exam Audio Study Guide! Practice Questions Edition Q18. What is the advantage of using Oracle Cloud Infrastructure Supercluster for AI workloads?

* It offers seamless integration with social media platforms.
* It provides a cost-effective solution for simple AI tasks.
* It delivers exceptional performance and scalability for complex AI tasks.
* It is ideal for tasks such as text-to-speech conversion.

Oracle Cloud Infrastructure Supercluster is a cloud service that provides ultrafast cluster networking, HPC storage, and OCI Compute bare metal instances. OCI Supercluster is ideal for training generative AI, including conversational applications and diffusion models, as it can deploy up to tens of thousands of NVIDIA GPUs per cluster for much greater scalability than similar offerings from other providers. OCI Supercluster also reduces the time needed to train AI models with simple Ethernet network architecture that provides ultrahigh performance at massive scale. Additionally, OCI Supercluster offers cost savings and access to AI subject matter experts56. Reference: OCI Supercluster and AI Infrastructure | Oracle, Oracle Delivers More Choices for AI Infrastructure and General-Purpose …

Q19. What is the primary goal of machine learning?

* Enabling computers to learn and improve from experience
* Explicitly programming computers
* Creating algorithms to solve complex problems

* Improving computer hardware

Machine learning is a branch of artificial intelligence that enables computers to learn from data and experience without being explicitly programmed. Machine learning algorithms can adapt to new data and situations and improve their performance over time2. Reference: Artificial Intelligence (AI) | Oracle

Q20. What is the purpose of Attention Mechanism in Transformer architecture?

* Convert tokens into numerical forms (vectors) that the model can understand.
* Break down a sentence into smaller pieces called tokens.
* Apply a specific function to each word individually.
* Weigh the importance of different words within a sequence and understand the context.

The attention mechanism in the Transformer architecture is a technique that allows the model to focus on the most relevant parts of the input and output sequences. It computes a weighted sum of the input or output embeddings, where the weights indicate how much each word contributes to the representation of the current word. The attention mechanism helps the model capture the long-range dependencies and the semantic relationships between words in a sequence12. Reference: The Transformer Attention Mechanism – MachineLearningMastery.com, Attention Mechanism in the Transformers Model – Baeldung

Q21. Which AI domain is associated with tasks such as identifying the sentiment of text and translating text between languages?

* Natural Language Processing
* Speech Processing
* Anomaly Detection
* Computer Vision

Natural Language Processing (NLP) is an AI domain that is associated with tasks such as identifying the sentiment of text and translating text between languages. NLP is an interdisciplinary field that combines computer science, linguistics, and artificial intelligence to enable computers to process and understand natural language data, such as text or speech. NLP involves various techniques and applications, such as:

Text analysis: Extracting meaningful information from text data, such as keywords, entities, topics, sentiments, emotions, etc.

Text generation: Producing natural language text from structured or unstructured data, such as summaries, captions, headlines, stories, etc.

Machine translation: Translating text or speech from one language to another automatically and accurately.

Question answering: Retrieving relevant answers to natural language questions from a knowledge base or a document collection.

Speech recognition: Converting speech signals into text or commands.

Speech synthesis: Converting text into speech signals with natural sounding voices.

Natural language understanding: Interpreting the meaning and intent of natural language inputs and generating appropriate responses.

Natural language generation: Creating natural language outputs that are coherent, fluent, and relevant to the context. Reference: : What is Natural Language Processing? | IBM, Natural language processing – Wikipedia

Q22. Which is an application of Generative Adversarial Networks (GANs) in the context of Generative AI?

* Creation of realistic images that resemble training data
* Prediction of continuous values from Input data
* Generation of labeled outputs for training
* Classification of data points into categories

Generative Adversarial Networks (GANs) are a type of AI model that can generate realistic images that resemble training data. The architecture of a GAN consists of two separate neural networks that are pitted against each other in a game-like scenario. The first network, known as the generator network, tries to create fake data that looks real. The second network, known as the discriminator network, tries to distinguish between real and fake data. The generator network learns from the feedback of the discriminator network and tries to fool it by improving the quality of the fake data. The discriminator network also learns from the feedback of the generator network and tries to improve its accuracy. The process continues until the generator network produces data that is indistinguishable from the real data4. GANs can be used to create realistic images of faces, animals, landscapes, and more5. Reference: Generative models – OpenAI, Artificial Intelligence Explained: What Are Generative Adversarial …

Q23. What role do tokens play in Large Language Models (LLMs)?
* They represent the numerical values of model parameters.
* They are used to define the architecture of the model’s neural network.
* They are Individual units into which a piece of text is divided during processing by the model.
* They determine the size of the model’s memory.

Tokens are the basic units of text representation in large language models. They can be words, subwords, characters, or symbols. Tokens are used to encode the input text into numerical vectors that can be processed by the model’s neural network. Tokens also determine the vocabulary size and the maximum sequence length of the model3. Reference: Oracle Cloud Infrastructure 2023 AI Foundations Associate | Oracle University

Q24. Which type of machine learning is used to understand relationships within data and is not focused on making predictions or classifications?
* Active learning
* Unsupervised learning
* Reinforcement learning
* Supervised learning

Unsupervised learning is a type of machine learning that is used to understand relationships within data and is not focused on making predictions or classifications. Unsupervised learning algorithms work with unlabeled data, which means the data does not have predefined categories or outcomes. The goal of unsupervised learning is to discover hidden patterns, structures, or features in the data that can provide valuable insights or reduce complexity. Some of the common techniques and applications of unsupervised learning are:

Clustering: Grouping similar data points together based on their attributes or distances. For example, clustering can be used to segment customers based on their preferences, behavior, or demographics.

Dimensionality reduction: Reducing the number of variables or features in a dataset while preserving the essential information. For example, dimensionality reduction can be used to compress images, remove noise, or visualize high-dimensional data in lower dimensions.

Anomaly detection: Identifying outliers or abnormal data points that deviate from the normal distribution or behavior of the data. For example, anomaly detection can be used to detect fraud, network intrusion, or system failure.

Association rule mining: Finding rules that describe how variables or items are related or co-occur in a dataset. For example, association rule mining can be used to discover frequent itemsets in market basket analysis or recommend products based on purchase history. Reference: : Unsupervised learning – Wikipedia, What is Unsupervised Learning? | IBM

Q25. In machine learning, what does the term “model training” mean?
* Analyzing the accuracy of a trained model
* Establishing a relationship between Input features and output
* Writing code for the entire program
* Performing data analysis on collected and labeled data

Model training is the process of finding the optimal values for the model parameters that minimize the error between the model predictions and the actual output. This is done by using a learning algorithm that iteratively updates the parameters based on the input features and the output1. Reference: Oracle Cloud Infrastructure Documentation

Q26. What is the purpose of fine-tuning Large Language Models?
* To reduce the number of parameters in the model
* To Increase the complexity of the model architecture
* To specialize the model’s capabilities for specific tasks
* To prevent the model from overfitting

Fine-tuning is the process of updating the model parameters on a new task and dataset, using a pre-trained large language model as the starting point. Fine-tuning allows the model to adapt to the specific context and domain of the new task, and improve its performance and accuracy. Fine-tuning can be used to customize the model’s capabilities for specific tasks such as text classification, named entity recognition, and machine translation82. Fine-tuning is also known as transfer learning or task-based learning. Reference: A Complete Guide to Fine Tuning Large Language Models, Finetuning Large Language Models – DeepLearning.AI

Q27. What is the primary function of Oracle Cloud Infrastructure Speech service?
* Converting text into images
* Analyzing sentiment n text
* Transcribing spoken language into written text
* Recognizing objects in images

Oracle Cloud Infrastructure Speech is an AI service that applies automatic speech recognition (ASR) technology to transform audio-based content into text. Developers can easily make API calls to integrate Speech’s pretrained models into their applications. Speech can be used for accurate, text-normalized, time-stamped transcription via the console and REST APIs as well as command-line interfaces or SDKs. You can also use Speech in an OCI Data Science notebook session. With Speech, you can filter profanities, get confidence scores for both single words and complete transcriptions, and more1. Reference: Speech AI Service that Uses ASR | OCI Speech – Oracle

Q28. Which AI domain is associated with tasks such as recognizing forces in images and classifying objects?
* Computer Vision
* Anomaly Detection
* Speech Processing
* Natural Language Processing

Computer Vision is an AI domain that is associated with tasks such as recognizing faces in images and classifying objects. Computer vision is a field of artificial intelligence that enables computers and systems to derive meaningful information from digital images, videos, and other visual inputs, and to take actions or make recommendations based on that information. Computer vision works by applying machine learning and deep learning models to visual data, such as pixels, colors, shapes, textures, etc., and extracting features and patterns that can be used for various purposes. Some of the common techniques and applications of computer vision are:

Face recognition: Identifying or verifying the identity of a person based on their facial features.

Object detection: Locating and labeling objects of interest in an image or a video.

Object recognition: Classifying objects into predefined categories, such as animals, vehicles, fruits, etc.

Scene understanding: Analyzing the context and semantics of a visual scene, such as the location, time, weather, activity, etc.

Image segmentation: Partitioning an image into multiple regions that share similar characteristics, such as color, texture, shape, etc.

Image enhancement: Improving the quality or appearance of an image by applying filters, transformations, or corrections.

Image generation: Creating realistic or stylized images from scratch or based on some input data, such as sketches, captions, or attributes. Reference: : What is Computer Vision? | IBM, Computer vision – Wikipedia

Q29. How is Generative AI different from other AI approaches?
* Generative AI understands underlying data and creates new examples.
* Generative AI focuses on decision-making and optimization.
* Generative AI generates labeled outputs for training.
* Generative AI is used exclusively for text-based applications.

Generative AI is a branch of artificial intelligence that focuses on creating new content or data based on the patterns and structure of existing data. Unlike other AI approaches that aim to recognize, classify, or predict data, generative AI aims to generate data that is realistic, diverse, and novel. Generative AI can produce various types of content, such as images, text, audio, video, software code, product designs, and more. Generative AI uses different techniques and models to learn from data and generate new examples, such as generative adversarial networks (GANs), variational autoencoders (VAEs), diffusion models, and foundation models. Generative AI has many applications across different domains and industries, such as art, entertainment, education, healthcare, engineering, marketing, and more. Reference: : Oracle Cloud Infrastructure AI – Generative AI, Generative artificial intelligence – Wikipedia

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