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Generative AI Fundamentals Quiz

Your score: 84%   Passing score: 80%   [Retake]

Congratulations! You passed this assessment.

✓ 1. What tool should you use to provide search functionality in your financial services product?

✓ Vertex AI Search

○ Document AI

○ Vertex AI Search for retail

○ Google Cloud Search

This answer is correct. Vertex AI provides enterprise grade search functionality that can be used out-of-the box or customized for your particular use case.

✓ 2. Where in Vertex AI will you find a user friendly interface, where you can test sample prompts, design your own prompts, and customize foundation models, to handle tasks that meet your application's needs?

○ Model Garden

○ PaLM for Text and Chat

✓ Vertex AI Studio

○ Vertex AI Agent Builder

This answer is correct. Vertex AI Studio provides a user friendly interface where you can get started with everything generative AI.

✓ 3. What is the name of the prompt design approach in which you provide the model examples to establish a pattern, together with your prompt?

○ Zero-shot

✓ Few-shot

○ In-context

○ Multi-shot

This answer is correct. Few-shot prompting is a design approach that supplies the model multiple examples of the desired input and output along with a prompt to establish a pattern.

✓ 4. What is machine learning?

○ Large, general purpose language models

○ Artificial intelligence technology that can produce various types of content

✓ Programs or systems that learn from data instead of being explicitly programmed

○ Algorithms used to describe and create new data

This answer is correct.

✓ 5. Which product would you choose to build voice-enabled applications for global audiences?

○ Imagen

○ Embeddings

○ Codey

✓ Chirp

This answer is correct. Chirp for Speech to Text is a product for Speech AI in Google Cloud.

✓ 6. Google's approach to responsible AI is based on which of the following commitments? (Select 4)

☐ It eliminates team disagreements.

✓ It's accountable and safe.

> This answer is correct.

✓ It's driven by scientific excellence.

> This answer is correct.

✓ It's built for everyone.

> This answer is correct.

☐ It speeds up product development processes.

✓ It respects privacy.

> This answer is correct.

✓ 7. Which of the following is a potential use of generative AI?

✓ A customer service chatbot

○ Automatic reading of X-rays

○ Predicting future sales

○ A robot that performs mechanical tasks

> This answer is correct.

✓ 8. How does generative AI work?

✓ It uses a neural network to learn from a large dataset.

○ It uses the internet to repeat answers for common questions.

○ It uses a rule-based system to generate output based on a set of predefined rules.

○ It uses a generic algorithm to evolve a population of models until it finds one that can generate the desired output.

> This answer is correct.

✓ 9. When discussing pricing with customers, you should focus on...

✓ The broad platform value, since Google Cloud provides the same enterprise-grade offering for generative AI solutions as the rest of the cloud infrastructure portfolio.

○ Focus on the revolutionary power of generative AI, since it can be a solution for every customer problem.

○ All of the answers are correct.

○ Focus on pricing, Vertex AI Agent Builder is the cheapest in the market.

> This answer is correct.

✓ 10. What features are available as part of Vertex AI Agent Builder?

✓ Vertex AI Search, Recommendations and AI Agents

○ Vertex AI Search, Image Generation, Conversational AI

○ Vertex AI Search and Conversation

○ Vertex AI Search, Coding, Personalize

> This answer is correct. Vertex AI Agent Builder provides out-of-the-box solutions for search, recommendations and conversational agents.

✓ 11. You want to organize documents into distinct groups, without predefining the groups. Which type of machine learning model should you use?

○ Natural language processing (NLP) model

○ Supervised learning model

○ Discriminative deep learning model

✓ Unsupervised learning model

This answer is correct.

✕ 12. What product should you use for your generative AI enterprise use cases?

○ Gemini app and Google AI Studio

✕ ~~Gemini app and Vertex AI Agent Builder~~

○ Vertex AI and Agent Builder

○ Gemini app and Vertex AI

This answer is not correct. Go back and review the courses.

✓ 13. What are two reasons that customers choose Vertex AI Search? (Select two options)

☐ Vertex AI Search only supports keyword search.

☐ Customers usually have a lot of time and resources to spend on building bespoke search solutions

✓ Existing systems only do keyword search, which is too limiting.

This is the correct answer.

✓ Improve existing search result experiences with LLM-based capabilities such as summarizing results.

This is the correct answer.

☐ You can build conversational AI chatbots, using Dialogflow CX.

✓ 14. What is Google Cloud's recommended starting method for improving your model's output?

○ Model Tuning with RLHF

✓ Prompt Tuning

○ Full Fine-Tuning

○ LoRA (Low-Rank Adaptation)

This answer is correct. Prompt Tuning is currently Google Clouds' preferred method for improving your model's output.

✓ 15. Which of the following is recommended by Google as most important in establishing AI governance?

✓ Building practices around ethical decision-making

○ Developing technical tools to evaluate ML models

○ Encouraging people to make decisions based on their own values

○ Creating decision trees to address common ethical situations

This answer is correct.

✕ 16. What action does Google recommend organizations take to ensure that AI is used responsibly?

○ Focus on being efficient

○ Follow a top-down approach to increase AI adoption

✕ ~~Use a checklist to evaluate responsible AI~~

○ Seek participation from a diverse range of people

This answer is not correct. Go back and review the courses.

✓ 17. How does an LLM generate its answers?

○ You provide a prompt and the LLM uses Google Search to provide a response based on search results.

○ You express rules using code, these act on data, and the LLM returns your answers.

○ You provide the answers and data, and let the LLM come up with the rules.

✓ You provide a prompt as input, and the LLM returns tokens sequentially according to a probability distribution.

This is the correct answer. An LLM uses vector embeddings to return tokens with a probability distribution for possible subsequent tokens relating to a user input prompt.

✓ 18. What are two current limitations of LLMs? (Select two options)

✓ Irrelevant or factually incorrect statements

This answer is correct. LLMs will sometimes state facts that are incorrect or respond with information that is not relevant to the user query.

☐ Datasets

☐ Semantic understanding

✓ Hallucinations

This answer is correct. Hallucinations are a common problem with LLMs, as LLMs sometimes generate a completely false response to a user query, but communicate it as if it were true.

☐ Natural language conversation

✓ 19. In terms of parameters for decoding strategies, what is the definition of Temperature?

○ Dynamically increase and decrease the number of words in a set, according to the next word's probability distribution.

✓ A number that can be used to tune the degree of randomness.

○ Ranks tokens based on the probability distribution relating to certain words.

○ A sample from a shortlist of output tokens.

This answer is correct. Temperature is a decoding strategy or parameter that can be used to increase or decrease the degree of randomness in the responses generated by the LLM.

✓ 20. Prompt tuning is a technique for:

○ Training large language models.

○ Making large language models more versatile.

✓ Improving the output quality of large language models.

○ Making large language models more accurate.

This answer is correct.

✗ 21. What does the prompt parameter "Top-P" control?

○ The randomness or creativity of the responses.

○ The number of instructions the model can follow.

✗ A sample from a shortlist of output tokens.

○ The number of words in a set, according to the next word's probability distribution.

This answer is not correct. Go back and review the courses.

✗ 22. Choose the answer that best describes the security posture of Vertex AI Agent Builder.

○ Vertex AI Agent Builder uses the latest GPU technology to encrypt your custom models.

○ Vertex AI Agent Builder offers the same security capabilities as other Google Cloud products like BigQuery, including data encryption in flight and disk and no data sharing across customers

○ Vertex AI Agent Builder offers the same security capabilities as

○ other Google Cloud Perimeter products, and only uses your logs and metadata to train foundation models.

○ Vertex AI Agent Builder does not store any customer data, making all interactions secure and private.

✓ 23. Which part of Vertex AI, acts as a repository, where you can access Google Cloud's state of the art foundation models, as well as third party and open source models.

○ Vertex AI Garden

✓ Model Garden

○ PaLM Garden

○ Vertex AI Studio

This answer is correct. Vertex AI Model Garden provides access to all Google Cloud's generative AI foundation models, as well as third party and open source models.

✓ 24. What product should an enterprise use if they don't have any ML expertise?

○ Gemini app

○ Vertex AI

○ Google AI Studio

✓ Vertex AI Agent Builder

This answer is correct. Vertex AI Agent Builder provides an out-of-the-box solution that can be implemented by developers and business users.

✓ 25. Why do business analysts choose Generative AI technologies like Vertex AI Search?

✓ Improve time-to-value to search, navigate, and extract insights and understanding from your own enterprise data.

○ Vertex AI Search enables you to improve the data quality in your documents.

○ Customize large models and incorporate state of the art generative capabilities natively into their own internal ML operational platforms

○ When coding, they want to reduce time from looking for code snippets online and copy-pasting them into their project.

This answer is correct.