IBM watsonx.ai Level 2 Quiz

You must receive a score of 75% or higher on the quiz to com Back Next
the course.

Started on	Saturday, October 12, 2024, 2:48 AM
State	Finished
Completed on	Saturday, October 12, 2024, 3:51 AM
Time taken	1 hour 3 mins
Feedback	**Congratulations, you passed the quiz!**

Question **1**

Correct

Points out of 1.00

Clients are increasingly concerned with being locked into a single cloud platform since many enterprise businesses have data in multiple clouds as well as on-premises. Having an AI platform that is anchored on a particular cloud is not desirable. How does IBM watsonx.ai (and in general watsonx and IBM Cloud Paks) differentiate itself in this regard?

- Watsonx.ai (as well as watsonx and IBM Cloud Paks) are written in C and can be easily re-compiled to be deployed on other cloud platforms
- Watsonx.ai (as well as watsonx and IBM Cloud Paks) are built on Red Hat OpenShift, it can be deployed on-premises or anywhere in the cloud. ✔
- Watsonx.ai (as well as watsonx and IBM Cloud Paks) are available on VMware images. These can be deployed wherever the clients have VMware set up.
- Watsonx.ai (as well as watsonx and IBM Cloud Paks) installable images are created for Linux (Ubuntu, RedHat, and Debian) as well as Windows 11. They can be deployed anywhere with these virtual OS images.

Question **2**

Correct

Points out of 1.00

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ChatGPT has put generative AI into mainstream awareness very quickly, growing to over 100 million users within just a couple of months. What kind of foundation model is ChatGPT built on?

- General Purpose Trained Model
- Natural Language Utilization Model
- Large Language Model ✔
- OpenAI WIKINET Model

Question **3**

Correct

Points out of 1.00

A client is interested in using generative AI in their workflow. They are aware that there are many open-source models available in the market and they want to know what models are available. Which watsonx offering provides a library of both open-source and IBM proprietary foundation models?

- Watsonx.ai includes a library of foundation models. ✔
- Watsonx.library is the service that provides a library of foundation models.
- Watsonx.governance catalogs and provides a library of foundation models.
- Watsonx.query provides access to remote models held by Hugging Face.

Question **4**

Correct

Points out of 1.00

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Generative AI, large language models, and foundation models have become popular topics to discuss with clients. Your client has been looking at different vendors including IBM watsonx, Amazon Bedrock, and Anthropic. The client is very impressed with the Anthropic 3Hs. What do the 3Hs stand for?

- Hugging Face-based, Helpful, Honest
- Helpful, Harmless, Honest ✔
- Hugging Face-based, Harmless, Honest
- Homogeneous, Harmless, Honest

Question **5**

Correct

Points out of 1.00

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A Cloud Pak for Data client has been using services like Watson Studio, Watson Assistant, and Watson Discovery and they think that watsonx.ai is just a clever rebranding. You want to clarify that watsonx.ai provides additional services on top of what's available in Watson Studio today. What should you mention?

- Watsonx.ai incorporates Guardium and QRadar, and this provides additional security features that are not available in Watson Studio.
- Watsonx.ai comes with a library of pre-trained foundation models. It provides a Prompt Lab where clients can try out different models and performance prompt with prompt engineering. ✔
- Watsonx.ai's added value is in providing a unified interface to all of IBM's Watson AI tooling such as Watson Studio, Watson Assistant and Watson Discovery. Clients can access them all in one single place.
- Watsonx.ai is a platform that allows users to take models from SageMaker, Azure Machine Learning, and Google Vertex AI and run it natively. It allows clients to deploy one single AI platform and run all of their existing models.

Question **6**

Correct

Points out of 1.00

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A client has been using Watson Assistant and is interested in taking the next step with generative AI. They have tried out some open-source models and are not convinced that prompt engineering is sufficient because the models would not get enough information or context for downstream tasks. You introduced the client to prompt tuning so they can input their data to help tune the model. What format, initially, is required to pass data into the watsonx.ai Tuning Studio?

- The data can be in JSONL or JSON format. ✔
- The data can be in PARQUET or JSON format.
- The data can be in PARQUET, AVRO, or CSV format.
- The data must be in an ICEBERG table cataloged in watsonx.data.

Question **7**

Incorrect

Points out of 1.00

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A client has experience working with traditional AI for many years. They are now looking into generative AI and foundation models. They know, despite all the press, that models won't "just work" with their applications and workflows without some modifications. They have done some research on prompt tuning, prompt engineering, and fine-tuning. They have come to you with questions about these processes. Which of the following is a correct response to share with the client?

- Both prompt tuning and prompt engineering requires inputting labeled data into the model for further training. Fine-tuning involves adjusting a set of parameters such as learning rate, number of epochs, etc.
- Prompt engineering will not change the weights of the underlying model. Both prompt tuning and fine-tuning will change the weights of the underlying model.
- Prompt engineering includes zero-shot learning. Prompt tuning and fine-tuning both require user data. Fine-tuning will change the underlying model weights.
- In terms of complexity, fine-tuning is the most complex, followed by prompt engineering, and the simplest to do is prompt tuning. ✖

Question 8

Correct

Points out of 1.00

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Your client listened to an IBM webinar about generative AI and they are confused about the trade-off and differences between prompt engineering and prompt tuning. What are some important points you should highlight about prompt engineering and prompt tuning?

- Both prompt engineering and prompt tuning require modifying the model with labeled data. However, in prompt tuning, clients need to supply a much larger set of labeled data (in the order of 10x to 100x more) but can get a much better-trained model in the end.
- With prompt engineering, a client does not need to provide labeled data, and less preparation and training time is required. In prompt tuning, a client will pass in a set of labeled data to tune the model. ✔
- As generative AI is a new field, different people tend to use different terms. But in truth, these two concepts are the same.
- These are two steps to the tuning process. Clients begin by providing a small set of data for prompt engineering. Once it is trained, prompt tuning involves changing parameters to get the best price-performance by finding the optimal combinations of model size and other parameters.

Question **9**

Correct

Points out of 1.00

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A client is eager to test watsonx.ai and has signed up to try it. They have asked you to provide some information about how to use the prompt lab. Which of the following is a correct statement about the watsonx.ai Prompt Lab?

- The Prompt Lab is where clients perform prompt engineering and prompt tuning. The Tuning Studio is only for fine-tuning.
- The Prompt Lab is where clients can perform prompt engineering: working with zero-shot, one-shot, and few-shot prompting. ✔
- The Prompt Lab is where users can provide their labeled data to fine-tune the model.
- On the watsonx.ai user interface, clients will go to the Prompt Lab to run prompt tuning and use the Tuning Studio for prompt engineering.

Question **10**

Correct

Points out of 1.00

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A client approaches you and mentions that they know watsonx.ai is providing different open-source models. They want to try out these open models to perform a variety of tasks such as summarizing, generating, and extracting. Which open models should you suggest the client try out to best suit these types of tasks?

- This client should try the mpt-instruct2 model.
- This client should try either the flan-ul2 or the mt0-xxl model. ✔
- The client can use any model of the open-source model from watsonx.ai - all work equally well.
- The client should try the gpt-neox model.

Question **11**

Correct

Points out of 1.00

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Generative AI has been used by millions of users worldwide for various tasks, from writing emails to marketing brochures, to generating reports, to even passing university exams. A client's Chief Information Officer (CIO) lamented that these are interesting but hardly meaningful in a business context. You assure this CIO that generative AI is not just useful for grabbing interesting headlines but it is great for businesses as well. What are some valid business use cases for generative AI?

- Perform strategic extrapolation on competing enterprises based on their past behavior, acquisition history, and gathering information about these companies from the web.
- Performing summarization of text, extracting of insights, generating new information, classification for sentiment or topics, and Question & Answering (Q&A). ✔
- Automatically generate new company HR policies whenever there is a question from an employee that has no clear answer from existing policies.
- Performing data sharing with different teams and companies using the same encoding-decoding foundation models. Users can pass in data and encode it with the model. The recipient will decode and receive the data when decoding it with the same model.

Question **12**

Correct

Points out of 1.00

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A client uses traditional AI extensively but is unfamiliar with generative AI. You suggest they can become familiar with how foundation models can be trained with simple prompt engineering. Which statement is true about prompt engineering?

- Prompt engineering is the process of providing a labeled data set (minimum of 100 million, maximum depending on the vendor) to train the model.
- Prompt engineering requires updating and changing the underlying model to fit specific tasks.
- There are three types of prompt engineering: zero-shot, one-shot, and infinite-shot.
- Prompt engineering is a new discipline for finding the optimal prompt to use with a foundation model for the best performance. ✔

Question **13**

Correct

Points out of 1.00

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Amazon Web Services (AWS), Microsoft Azure, and Google Cloud Platform (GCP) have all entered the foundation model race with their own platforms. What is true about these offerings?

- AWS Bedrock, Azure OpenAI Service, and Google Generative AI studio are only available on their respective cloud and nowhere else. ✔
- Google Generative AI Studio stores everything on Google Big Query and is available on-premises or in other clouds via Google BigQuery Omni.
- AWS Bedrock is a fully integrated suite with governance already built in via AWS Glue.
- Azure OpenAI is not multi-cloud-enabled, but it can be made available on-premises via Azure Stack.

Question **14**

Correct

Points out of 1.00

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Since ChatGPT was released by OpenAI in November 2022 many other vendors have entered the generative AI space. A client is feeling pressure to implement AI into their business workflows or fall behind the competition. They want to know why they should consider IBM watsonx.ai over other generative AI vendors. Which of the following are valid watsonx.ai differentiators?

- IBM watsonx.ai is part of IBM Cloud Pak for Security which gives clients access to all the security features available from IBM Cloud Pak for Security, including Guardium and QRadar.
- IBM watsonx.ai is built on open technologies, designed to be trusted, targeted toward business use cases, and empowers value creators. ✔
- IBM watsonx.ai supports both traditional and generative AI. IBM offers open-source models from Hugging Face, proprietary models from IBM and vendors such as AI21, Anthropic, and Stability AI.
- IBM has a partnership with Hugging Face and all of the models available from Hugging Face are available and integrated with Watson Studio

Question **15**

Incorrect

Points out of 1.00

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Watsonx.ai gives clients access to popular open-source foundation models (FMs), as well as a set of IBM FMs built on highly curated data. Which of the following is true about the IBM proprietary FM offerings?

- IBM offers decoder-only models, this includes the Slate, Granite, and Sandstone IBM FMs. ✖
- IBM Granite is a decoder-only model and Sandstone is an encoder-decoder model.
- IBM offers encoder-only and encoder-decoder models. IBM will not provide a decoder-only model but will provide access to industry-leading models like GPT.
- Instead of offering decoder models and encoder models, IBM's FMs are all encoder-decoder. This reduces the complexity for clients as there is no need to separate the two.

Question **16**

Correct

Points out of 1.00

Back Next

Your client has been building their own AI models for a long time and has successfully applied these models to solve their business requirements. They have heard that foundation models are trained with "massive amounts of data" and feel they are the same as the models they have been building. What would be a correct statement to explain the difference between traditional models and foundation models?

- The client has incorrect information. Both traditional AI models and foundation models are trained with massive amounts of unlabeled data. Traditional AI models are task-specific, but foundation models are not.
- Traditional AI models are trained with massive amounts of unlabeled data, whereas foundation models are trained with a massive amount of labeled data.
- The client is correct that both require training with massive amounts of data. Traditional AI models are language-specific, but foundation models are multi-lingual.
- Traditional AI models are trained with massive amounts of labeled data, whereas foundation models are trained with a massive amount of unlabeled data using self-supervised learning. ✔

Question **17**

Correct

Points out of 1.00

Back Next

The data engineers state that ChatGPT "can do all sorts of amazing things" for their company. The Chief Information Officer (CIO) is very excited about the opportunity and is talking about incorporating ChatGPT to achieve new levels of efficiency in business workflows. How would you caution the CIO about selecting a generative AI platform and what are some valid questions they should ask about the foundation models they might consider using?

- Foundation models require a massive amount of diverse data to train that only the open-source community can truly provide. Clients must look for platforms that support open-source models for production. Proprietary models are useful only when used with products from the same vendor.
- Building foundation models require a huge amount of resource and only hyperscalers have the true ability to train the models. Clients must look for models that come from IBM, Amazon Web Services (AWS), Microsoft Azure, or Google only. Open-source models are only good for testing new tasks.
- Clients should understand that the quality of data used to train a model is important. They also need to know how the AI model detects and corrects for bias, how to prevent hallucinations, and what data privacy and regulatory compliance standards are in place. ✔
- Ultimately, cost is the only thing that truly matters to an enterprise. Everyone can claim to be able to do generative AI, but this client should test to see what vendor model can complete a task at the lowest cost.

Question **18**

Correct

Points out of 1.00

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While generative AI has huge potential, there are also many inhibitors. According to IBM Institute for Business Value research: "Generative AI: The state of the market", what are the 4 main concerns, inhibitors, and fears companies have on adopting generative AI?

- Explainability, Ethics, Drift, and Tunability
- Explainability, Bias, Trust, and Ethics ✔
- Trust, Transparency, Tunability, and Ethics
- Explainability, Transparency, Drift, and Ethics

Question **19**

Correct

Points out of 1.00

A client is interested in leveraging the power of generative AI. However, they have had no prior experience and are a bit unsure how they can learn to do prompt engineering. You assure them and state that IBM provides a lot of examples of prompt engineering for various use cases in the Prompt Lab. What are some of these examples?

- Examples include: summarization, classification, generation, and extraction. ✔
- Examples include: generating a graph from data points, classifying sentiments, and explaining code.
- Examples include: image generation, Question & answering (Q&A), and classification.
- Examples include: audio generation, video creation, and generating email.

Question **20**

Correct

Points out of 1.00

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A client has been working with Watson Studio and Watson Machine Learning for years and have developed skills; however, they are skeptical about generative AI - seeing it as more of a fad than having the ability to deliver true business value. They ask you to show them the difference between traditional AI and generative AI. Which of the following is true?

- Both traditional AI models and generative AI foundation models are adaptable and transfer well to support different tasks. Generative AI models are just less expensive and less time-consuming to train.
- Traditional AI models do not require supervised learning and are adaptable to different tasks. Generative AI foundation models require supervised learning.
- Traditional AI models are general, once trained with labeled data they apply to many different tasks. Generative AI foundation models cannot be trained for specific use cases.
- ✔ Traditional AI and the models built with this method are typically task-specific. Generative AI foundation models are pre-trained with unlabeled data and can be adapted to multiple tasks.

Question **21**

Correct

Points out of 1.00

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A client is training a group of data scientists on foundation models and generative AI. They understand it is important to work with prompts and gain some experience with a model's output. This client is interested in the IBM watsonx.ai Prompt Lab. What are some of the parameters they can try to modify in the Prompt Lab?

- Types of decoding, timeon value for cluster graphical processing unit (GPU) usage, stop sequence, minimum time in 10 seconds increment that the model must use before providing results.
- Types of decoding, repetition penalty, stop sequence, number of minimum output tokens. ✔
- Repetition penalty, percent of memory usage lower and upper limit, number of prompts allowed.
- Choice of foundation models, percent of base data to be included, number of maximum tokens, maximum time for creating response to prompt.

Question **22**

Correct

Points out of 1.00

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A client has been working with traditional AI and is dissatisfied with the amount of time and resources that are needed to train a model for each specific task using their proprietary data. What is a valid reason why they should consider using foundation models?

- Foundation models only need a small amount of labeled data to fine-tune for a specific task. ✔
- Foundation models are customizable by all vendors. Clients can supply the data and have the vendor build a customized model from the ground up.
- Foundation models are much cheaper to run than traditional AI. Most foundation models can run on regular CPU nodes.
- Foundation models refer to a huge collection of models pre-built for all common verticals. Clients simply pick the right foundation model to use.

Question **23**

Correct

Points out of 1.00

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Generative AI is a consideration for many clients' executives when they are considering an AI adoption and deployment strategy. Executives should consider an AI vendor with a sound strategy that includes data used for model training, governance, regulation, and compliance. What are the components of IBM watsonx that seek to address these end-to-end strategic requirements?

- watsonx.ai, watsonx.data, and watsonx.governance ✔
- watsonx.foundation, watsonx.generative, and watsonx.ai
- watsonx.studio, watsonx.governance and watsonx.data
- watsonx.ai, watsonx.query, and watsonx.governance

Question **24**

Correct

Points out of 1.00

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A client has run some queries using ChatGPT and other open-source foundation models from Hugging Face, but they are unsure about what a decoder-only model is. What is true about a decoder-only foundation model?

- Decoder-only models are translation models. Input languages to decoder models are encrypted and tokenized, then decoded to provide a translated output.
- Decoder-only models are used with chat platforms to generate new responses, answers, or text based on simple input from users. ✔
- Decoder-only models are widely used for non-generative tasks like classifying customer feedback and extracting information from long documents.
- Decoder-only models are used to deconstruct coding examples. Users pass in a code snippet and the model will describe what the code is doing.

Question **25**

Correct

Points out of 1.00

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Trust in foundation models begins with trust in the data. If a model is trained with "bad" data, then it will provide poor results. One of the strengths of watsonx.ai is in the quality of the data used to train IBM's proprietary foundation models. What makes IBM's data superior to other data that is used to train foundation models offered in the market today?

- IBM encrypts all data before putting it in watsonx.data. Only this data is used to train models. The integration with watsonx.ai allows the data to stay encrypted for training - hence there is no chance of corrupted data for model training.
- IBM performs data deduplication (exact and fuzzy dedup) as well as extensive data annotation (filtering out hate, abuse, profanity), checking data quality, detecting copyright and license material. ✔
- IBM only uses in-house data. Because the data is used by IBM, it is already vetted and curated, and it can be trusted since IBM has one of highest quality standards in the industry.
- IBM only uses data from open-source repositories (GitHub, Hugging Face, OpenAI). These elevate IBM models to the same standard as OpenAI's GPT 4.0 model which is much better tuned than ChatGPT.