

Your grade: 100%

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1. Which among the following is best accomplished using generative adversarial networks (GANs)?

1 / 1 point

- ☐ Generating text from voice conversations
- ☐ Utilizing natural language for chatbot conversations
- ☐ Translating text from one language to another
- ☒ Generating realistic images based on training data

✓ Correct

You can use GANs for image-to-image translation, such as creating realistic images from sketches, and deepfake creation, such as bringing famous actors back to life in films.

2. Which generative AI model consists of two sub-models: A generator and a discriminator?

1 / 1 point

- ☐ Recurrent neural networks (RNNs)
- ☐ Variational autoencoders (VAEs)
- ☐ Transformers
- ☒ Generative adversarial networks (GANs)

✓ Correct

GAN consists of two sub-models: A generator and a discriminator. The generator creates fake samples and sends them to the discriminator. The discriminator checks their authenticity by comparing them with real samples from a domain set. It then assigns a probability score to each sample, indicating how likely the sample is to be authentic.

3. Which large language model (LLM) functions mainly as a decoder and is highly effective in tasks that require generating coherent and contextually appropriate content?

1 / 1 point

- ☒ Generative pre-trained transformer (GPT)
- ☐ Text-to-Text Transfer Transformer (T5)
- ☐ Bidirectional Encoder Representations from Transformers (BERT)
- ☐ Bidirectional and Auto-Regressive Transformers (BART)

✓ Correct

GPT primarily acts as a decoder, adept at generating text. It excels in tasks where creating coherent and contextually relevant content is crucial, for example, chatbots.

4. Which generative AI model matches the description below?

1 / 1 point

'The model operates on an encoder-decoder framework where the encoder network first compresses input data into a simplified, abstract space that captures essential characteristics. The decoder network then uses this condensed information to recreate the original data.'

- ☐ Diffusion models
- ☐ Generative adversarial networks (GANs)
- ☒ Variational autoencoders (VAEs)
- ☐ Recurrent neural networks (or RNNs)

✓ Correct

VAEs operate on an encoder-decoder framework where the encoder first compresses input data to capture essential characteristics, and the decoder uses the condensed information to recreate the original data.

Language models such as generative pre-trained transformer, or GPT, are referred to as **large** language models because _____.

- ☒ They contain billions of parameters defining the model's behavior
- ☐ They are used in various industries such as healthcare and manufacturing
- ☐ They can be used for large number of use cases ranging from text summarization to translation
- ☐ They have very high memory requirements

✓ **Correct**

They are referred to as large language models due to the size of the training data set, which may reach petabytes. Also, these models contain billions of parameters, which are variables defining the model's behavior.