1. Which of the following is NOT a type of Generative AI model?

a) GAN (Generative Adversarial Network)

b) RNN (Recurrent Neural Network)

c) VAE (Variational Autoencoder)

d) CNN (Convolutional Neural Network)

2. What is the primary goal of Generative Adversarial Networks (GANs)?

a) Image classification

b) Image generation

c) Speech recognition

d) Text summarization

3. Which GitHub repository could you explore to find implementations of state-of-the-art Generative AI models?

a) tensorflow/tensorflow

b) pytorch/pytorch

c) openai/gpt

d) generative-models/models

4. What is the purpose of the discriminator in a GAN?

a) To generate realistic data

b) To classify data as real or fake

c) To optimize the generator

d) To preprocess input data

5. Which type of Generative AI model is commonly used for generating images with specific characteristics?

a) Variational Autoencoder (VAE)

b) Recurrent Neural Network (RNN)

c) Deep Belief Network (DBN)

d) Conditional Generative Adversarial Network (cGAN)

6. In GitHub, what might you find in a repository dedicated to Generative AI?

a) Pretrained models and datasets

b) Documentation for using Microsoft Office

c) Game development tutorials

d) Investment strategies

7. What is the primary advantage of using Generative AI for data augmentation?

a) It reduces computational overhead

b) It increases the interpretability of models

c) It helps create more diverse datasets

d) It improves model convergence speed

8. Which technique is used to measure the quality of images generated by a Generative AI model?

a) BLEU score

b) PSNR (Peak Signal-to-Noise Ratio)

c) F1 score

d) AUC-ROC curve

9. Which of the following is NOT a common application of Generative AI?

a) Style transfer

b) Text summarization

c) Image-to-image translation

d) Music generation

10. What does the term "latent space" refer to in the context of Generative AI?

a) The space where input data is transformed before being fed into the model

b) The space of all possible outputs generated by the model

c) The space where latent variables are manipulated to generate new data

d) The space where the model's parameters are optimized during training

11. Which GitHub feature is commonly used to showcase generated samples and model performance metrics?

a) Issues

b) Pull requests

c) Projects

d) README.md files

12. Which programming language is commonly used for implementing Generative AI models?

a) Python

b) Java

c) C++

d) MATLAB

13. What is the primary challenge faced when training Generative AI models?

a) Lack of available computing resources

b) Difficulty in collecting training data

c) Mode collapse

d) Limited access to model architectures

14. Which GitHub repository might contain implementations of both training and inference code for Generative AI models?

a) models/generative

b) notebooks/tutorials

c) papers/research

d) datasets/generative

15. What is the purpose of using transfer learning in Generative AI?

a) To transfer knowledge from one domain to another

b) To transfer data between different repositories

c) To transfer gradients during backpropagation

d) To transfer pre-trained model weights to new tasks

16. Which technique is commonly used to regularize Generative AI models and prevent overfitting?

a) Dropout

b) Batch normalization

c) L1 regularization

d) Sigmoid activation

17. What is the primary difference between autoencoders and Generative Adversarial Networks (GANs)?

a) Autoencoders are unsupervised learning models, while GANs are supervised.

b) Autoencoders aim to reconstruct input data, while GANs generate new data samples.

c) Autoencoders use convolutional layers, while GANs use recurrent layers.

d) Autoencoders require labeled data for training, while GANs do not.

18. What is the role of the generator in a Generative Adversarial Network (GAN)?

a) To discriminate between real and fake data

b) To optimize the discriminator

c) To generate realistic data samples

d) To preprocess input data

19. Which GitHub repository might contain tutorials and beginner-friendly resources for learning about Generative AI?

a) awesome-generative-ai

b) advanced-deep-learning

c) machine-learning-algorithms

d) algorithms-for-beginners

20. Which evaluation metric is commonly used for assessing the quality of text generated by language models like GPT (Generative Pre-trained Transformer)?

a) BLEU score

b) F1 score

c) PSNR (Peak Signal-to-Noise Ratio)

d) ROC-AUC score