Week-8

GPT3 has been used to generate these seminar questions.

Answer the following Multiple-Choice Questions

1. What does GPT stand for?

    a) General Purpose Transformer

    b) Generative Pre-trained Transformer

    c) Gradient Predictive Tool

    d) Gaussian Process Technology

2. Which company developed GPT?

    a) Microsoft

    b) Google

    c) OpenAI

    d) Facebook

3. What is the purpose of GPT?

    a) To perform language translation

    b) To generate text

    c) To detect spam messages

    d) To analyze social media trends

4. What is the architecture of GPT?

    a) Convolutional Neural Network (CNN)

    b) Recurrent Neural Network (RNN)

    c) Transformer Neural Network

d) Autoencoder Neural Network

5. What is the maximum number of tokens that GPT-3 can process?

    a) 50,000

    b) 100,000

    c) 175,000

    d) 300,000

6. What is the architecture of the GPT models?

    a) Recurrent Neural Networks (RNN)

    b) Convolutional Neural Networks (CNN)

    c) Transformer Neural Networks

    d) Autoencoder Neural Networks

7. Which activation function is typically used in GPT models?

    a) ReLU

    b) Sigmoid

    c) Tanh

    d) Softmax

8. What is the purpose of the attention mechanism in the GPT architecture?

    a) To reduce the number of parameters in the model

    b) To enable the model to attend to different parts of the input sequence

    c) To enable the model to generate text of different lengths

    d) To enable the model to perform different tasks such as translation, summarization, and question-answering

9. What is the pre-training process used in GPT models?

    a) Supervised learning

    b) Unsupervised learning

Fakhreldin Saeed

c) Reinforcement learning

d) Semi-supervised learning

10. Which version of GPT has the largest number of parameters?

    a) GPT-1

    b) GPT-2

    c) GPT-3

    d) GPT-4

11. How does GPT-3 generate text?

    a) By predicting the next word in a sequence based on the previous words

    b) By using a random sampling technique

    c) By selecting the most likely word from a set of candidates

    d) By using a combination of pre-defined templates and machine learning

12. What is fine-tuning in the context of GPT?

    a) Pre-training a new GPT model from scratch

    b) Training a GPT model on a specific downstream task

    c) Tuning the hyperparameters of a pre-trained GPT model

    d) Applying a fine-grained evaluation to a pre-trained GPT model

13. Which of the following is a common approach for fine-tuning GPT models?

    a) Training on a large, diverse dataset

    b) Freezing all layers except the output layer

    c) Using a different optimizer than the one used during pre-training

    d) Using a larger batch size than the one used during pre-training

14. Which type of transfer learning is fine-tuning GPT an example of?

    a) One-shot learning

b) Reinforcement learning

c) Unsupervised learning

d) Semi-supervised learning

15. What is the purpose of adding task-specific tokens to the input sequence during fine-tuning?

a) To signal the start and end of the input sequence

b) To add additional context to the input sequence

c) To indicate the specific downstream task being performed

d) To prevent overfitting during training

16. What is a common metric used to evaluate the performance of fine-tuned GPT models on downstream tasks?

a) Perplexity

b) Accuracy

c) Precision

d) F1 score

17. What is the primary benefit of fine-tuning GPT-3?

a) It allows for the creation of entirely new types of models

b) It improves the accuracy of pre-existing models

c) It increases the speed of model training

d) It reduces the computational resources required for training

18. How many pre-trained models are available for fine-tuning in GPT-3?

a) One

b) A few dozen

c) Hundreds

d) Thousands

Fakhreldin Saeed

19. Which of the following is a common approach for fine-tuning GPT-3 models?

    a) Fine-tuning on a large, diverse dataset

    b) Using a different optimizer than the one used during pre-training

    c) Increasing the learning rate for fine-tuning

    d) Freezing all layers except the output layer

20. What is the primary limitation of fine-tuning GPT-3?

    a) It can be time-consuming and computationally expensive

    b) It can lead to overfitting on the downstream task

    c) It can result in a loss of generalizability

    d) It can introduce bias into the pre-trained model

21. Which Python library can be used for fine-tuning GPT-3?

    a) Scikit-learn

    b) PyTorch

    c) TensorFlow

    d) Keras

22. Which of the following is a common task that GPT-3 can be fine-tuned for using Python?

    a) Image classification

    b) Speech recognition

    c) Sentiment analysis

    d) Reinforcement learning

23. Which Python module can be used to interface with GPT-3 APIs?

    a) requests

    b) urllib

    c) httplib

Fakhreldin Saeed

d) http.client

24. Which of the following is a common approach for fine-tuning GPT-3 using Python?

    a) Using a pre-built fine-tuning script

    b) Writing a custom script from scratch

    c) Modifying the pre-training script provided by OpenAI

    d) Using a pre-trained GPT-3 model directly without fine-tuning

25. Which of the following is a common step in fine-tuning GPT-3 using Python?

    a) Creating a new GPT-3 model from scratch

    b) Loading a pre-trained GPT-3 model

    c) Fine-tuning on a large, diverse dataset

    d) Evaluating the fine-tuned model on the pre-training data

Fakhreldin Saeed