**INT426 (Gen AI) CA-3 Set 6**

1. In the context of fine-tuning Large Language Models (LLMs), what does the term "domain adaptation" refer to?

a) Adapting the model to a specific task or field of study

b) Adjusting hyperparameters to optimize model performance

c) Customizing the model architecture for better efficiency

d) Increasing the number of training epochs to improve accuracy

\*\*Answer: a) Adapting the model to a specific task or field of study\*\*

2. What significant challenge arises when fine-tuning Large Language Models (LLMs) for niche applications, particularly in healthcare or finance?

a) Limited availability of labeled training data

b) Difficulty in selecting appropriate hyperparameters

c) High computational resource requirements

d) Incompatibility with industry-standard protocols

\*\*Answer: a) Limited availability of labeled training data\*\*

3. How do Large Language Models (LLMs) contribute to innovative problem-solving compared to traditional algorithms?

a) By strictly adhering to established patterns and rules

b) By providing only limited variations in output

c) By offering diverse and imaginative solutions

d) By relying solely on human input for problem-solving

\*\*Answer: c) By offering diverse and imaginative solutions\*\*

4. What is a significant limitation of Large Language Models (LLMs) in generating coherent text, particularly in specialized domains?

a) Limited vocabulary capacity

b) Inability to process unstructured data

c) Difficulty in understanding complex contexts

d) High computational resource requirements

\*\*Answer: c) Difficulty in understanding complex contexts\*\*

5. In AI application development, how does GPT-4 primarily contribute to enhancing user experiences in conversational interfaces?

a) By generating contextually relevant responses

b) By generating realistic images based on user input

c) By predicting user preferences with high accuracy

d) By automating complex data processing tasks

\*\*Answer: a) By generating contextually relevant responses\*\*

6. Which AI model specializes in generating high-quality images from textual descriptions, including abstract concepts?

a) ChatGPT

b) GPT-3.5

c) Dall-E

d) GPT-4

\*\*Answer: c) Dall-E\*\*

7. What advantage does learning to code with AI offer in developing interactive applications, particularly those involving natural language understanding?

a) It eliminates the need for understanding programming fundamentals

b) It provides greater flexibility in application design

c) It accelerates the development process through automation

d) It ensures higher accuracy in user interactions

\*\*Answer: c) It accelerates the development process through automation\*\*

8. How does ChatGPT contribute to beginners' learning experiences with Microsoft Excel, particularly in data analysis tasks?

a) By automatically generating complex statistical models

b) By providing real-time insights into data trends and patterns

c) By offering contextual help and explanations for Excel functions

d) By enabling seamless integration with external databases

\*\*Answer: c) By offering contextual help and explanations for Excel functions\*\*

9. What is one specific way ChatGPT can assist beginners in Excel, particularly in formula creation and troubleshooting?

a) By suggesting advanced pivot table configurations

b) By providing step-by-step explanations for complex formulas

c) By automating the creation of dynamic charts and graphs

d) By optimizing spreadsheet layouts for better readability

\*\*Answer: b) By providing step-by-step explanations for complex formulas\*\*

10. How can understanding ChatGPT aid beginners in navigating Excel more efficiently, particularly in data manipulation tasks?

a) By suggesting keyboard shortcuts for common operations

b) By automating the generation of custom reports and dashboards

c) By providing real-time collaboration features for team projects

d) By optimizing Excel functions for faster computation

\*\*Answer: a) By suggesting keyboard shortcuts for common operations\*\*

11. Which AI model is typically used for automating text-based tasks in Excel, such as data extraction and cleansing?

a) Dall-E

b) GPT-3.5

c) GPT-4

d) ChatGPT

\*\*Answer: d) ChatGPT\*\*

12. What is the primary function of Dall-E in AI application development, particularly in creative content generation?

a) Generating text

b) Generating images from textual descriptions

c) Analyzing sentiment in user feedback

d) Recognizing objects in images

\*\*Answer: b) Generating images from textual descriptions\*\*

13. What advantage does learning to code with AI offer in building applications like chatbots and recommenders, particularly in terms of deployment speed?

a) It reduces the need for human input during development

b) It enables seamless integration with legacy systems

c) It speeds up the development process by leveraging pre-trained models

d) It ensures higher accuracy in user interactions through continuous learning

\*\*Answer: c) It speeds up the development process by leveraging pre-trained models\*\*

14. How does fine-tuning contribute to enhancing the performance of Large Language Models (LLMs), particularly in specialized domains like legal or scientific research?

a) By reducing the model size to improve computational efficiency

b) By increasing the diversity of training data to improve generalization

c) By customizing the model architecture to better capture domain-specific nuances

d) By optimizing the learning rate to accelerate convergence during training

\*\*Answer: c) By customizing the model architecture to better capture domain-specific nuances\*\*

15. What is a significant advantage of using Large Language Models (LLMs) in generative AI, particularly in creative content generation?

a) They require minimal computational resources compared to traditional algorithms

b) They can generate text in multiple languages with high accuracy

c) They can generate diverse and coherent text across various topics and styles

d) They are adaptable to different domains without extensive fine-tuning

\*\*Answer: c) They can generate diverse and coherent text across various topics and styles\*\*