Q) Which statement is TRUE about prompts in language models?

(a) The longer the prompt, the better the model's performance.
(b) Shorter, more concise prompts are generally more effective.
(c) Including irrelevant information in the prompt can improve results.
(d) Prompts have no influence on the output of language models.

Ans) b

Q) What is a potential risk of overfitting prompts to specific tasks?

(a) Increased model accuracy and performance
(b) Improved generalizability of the model to new tasks
(c) Decreased model performance on unseen data
 (d) Enhanced interpretability of the model's reasoning

Ans) c

Q) Which technique can be used to identify potential biases in prompts?

(a) Testing the model with diverse input data
(b) Measuring the model's accuracy on benchmark datasets
(c) Analyzing the internal state representations of the model
(d) Simply asking the model if it is biased

Ans) a

Q) What is a potential ethical concern regarding the use of prompt engineering?

(a) Improved efficiency and automation in communication
(b) Increased accessibility of advanced NLP tools to everyone
(c) The possibility of generating misleading or deceptive outputs
(d) Reduced demand for human creativity and imagination

Ans) c

Q) What type of evaluation metric is most relevant for assessing the effectiveness of prompts?

(a) Loss function of the NLP model
(b) Number of prompts generated per day
(c) Relevance and coherence of the model's responses
(d) Computational resources required for model inference

Ans) c

Note(IMP)

Supervised learning - It is particularly useful for tasks like summarization, question answering and generating specific creative text formats.

Reinforcement Learning - It is particularly effective for tasks that require continuous learning and improvement, such as dialogue generation and machine translation.

Few-Shot Learning - Few shot learning is particularly useful for tasks where labeled data is scarce or expensive to acquire. It trains LLMs with minimal data and It gives small number of examples. (Few Examples)

Zero-Shot Learning - Zero shot learning is a more challenging approach that aims to train LLMs without any explicit examples.(Zero Examples)

one-shot learning - One-shot learning is a machine learning (ML) paradigm that enables models to learn from a single example. (One Examples)

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which scenarios is one-shot learning more suitable than few-shot learning?

When there is extremely limited data available, when rapid adaptation to new tasks is required, When the task is relatively simple.

which scenarios is zero-shot learning more suitable than one-shot learning?

When the focus is on learning abstract concepts, when there is a rich knowledge base available, when the task involves generating outputs for new classes and no examples should be provided.

which scenarios is few-shot learning more suitable than zero-shot learning?

When there is a small amount of labeled data available, when the task involves complex decision-making, when the task is more realistic and practical.

Examples of few shot learning: Requires less data , Is more practical for real-world applications , Can be used for a wider range of tasks

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- typical number of examples used in few-shot learning is less than 20

- learning is most suitable for low-resource settings – one shot learning

- learning is most suitable for concept learning - Zero shot learning

- learning is most suitable for domain adaptation -Few shot learning

Q) Which AI learning paradigm requires minimal to no training data for each new task?

Ans) Zero Shot

Q) Which learning paradigm leverages knowledge from previously learned tasks to adapt to new ones?

Ans) All zero shot, one shot and Few Shot

Q) Few-shot learning can be beneficial for tasks where:

(a) Large datasets are readily available (b) Training data is expensive or difficult to obtain
(c) Complex reasoning and decision-making are required (d) High levels of accuracy are critical

Ans) b

Q) Which metric is often used to evaluate the performance of few-shot learning models?

(a) Training time (b) Model size (c) Accuracy on novel tasks (d) Generalizability to unseen data

Ans) c

Q) What is a major factor influencing the effectiveness of few-shot learning techniques?

(a) Computational resources (b) Task complexity (c) Model architecture and learning algorithms   (d) Availability of high-quality training data

Ans) c

Q) Which research area is closely related to few-shot learning?

(a) Transfer learning (b) Meta-learning (c) Natural language processing (d) Reinforcement learning

Ans) b

Q) Is Zero-shot learning can achieve human-level performance on complex tasks with no training data?

Ans) False

Q) IS One-shot learning being typically easier to implement than few-shot learning?

Ans) True