Graded Assignment

Week 2 quiz

Review Learning Objectives

coach Beta

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Assignment details

Due Jul 14, 11:59 PM +07

Attempts Unlimited

Submitted Jun 29, 5:05 PM +07

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100%

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1. Fill in the blanks: _____ involves using many prompt-completion examples as the labeled training dataset to continue training the model by updating its weights. This is different from _____ where you provide prompt-completion examples during inference. **1 point**

- (•) Instruction fine-tuning, In-context learning
- ( ) Prompt engineering, Pre-training
- ( ) Pre-training, Instruction fine-tuning
- ( ) In-context learning, Instruction fine-tuning

2. Fine-tuning a model on a single task can improve model performance specifically on that task; however, it can also degrade the performance of other tasks as a side effect. This phenomenon is known as: **1 point**

- (•) Catastrophic forgetting
- ( ) Catastrophic loss
- ( ) Model toxicity
- ( ) Instruction bias

3. Which evaluation metric below focuses on precision in matching generated output to the reference text and is used for text translation? **1 point**

- (•) BLEU
- ( ) HELM
- ( ) ROUGE-1
- ( ) ROUGE-2

4. Which of the following statements about multi-task finetuning is correct? Select all that apply: **1 point**

- [ ] Performing multi-task finetuning may lead to slower inference.
- [x] Multi-task finetuning can help prevent catastrophic forgetting.
- [ ] Multi-task finetuning requires separate models for each task being performed.
- [x] FLAN-T5 was trained with multi-task finetuning.

5. "Smaller LLMs can struggle with one-shot and few-shot inference:" **1 point**

Is this true or false?

- (•) True
- ( ) False

6. Which of the following are Parameter Efficient Fine-Tuning (PEFT) methods? Select all that apply. **1 point**

- [x] Selective
- [ ] Subtractive
- [x] Reparameterization
- [x] Additive

7. Which of the following best describes how LoRA works? **1 point**

- ( ) LoRA trains a smaller, distilled version of the pre-trained LLM to reduce model size
- ( ) LoRA continues the original pre-training objective on new data to update the weights of the original model.
- (•) LoRA decomposes weights into two smaller rank matrices and trains those instead of the full model weights.
- ( ) LoRA freezes all weights in the original model layers and introduces new components which are trained on new data.

8. What is a soft prompt in the context of LLMs (Large Language Models)? **1 point**

- (•) A set of trainable tokens that are added to a prompt and whose values are updated during additional training to improve performance on specific tasks.
- ( ) A strict and explicit input text that serves as a starting point for the model's generation.
- ( ) A technique to limit the creativity of the model and enforce specific output patterns.
- ( ) A method to control the model's behavior by adjusting the learning rate during training.

9. "Prompt Tuning is a technique used to adjust all hyperparameters of a language model." **1 point**

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