Language Models are Few-Shot Learners

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Main concepts - Transforms

- Limitations:
  - Need for a large dataset of labeled examples
  - The potential to exploit spurious correlations in training data fundamentally grows with the expressiveness of the model and the narrowness of the training distribution
  - Humans do not require large supervised datasets to learn most language tasks

Meta Learning

In the context of language models, this means the model develops a broad set of skills and pattern recognition abilities at training time and then uses those abilities at inference time to rapidly adapt to or recognize the desired task.

In-context learning

Using the text input of a pre-trained language model as a form of task specification: the model is conditioned on a natural language instruction and/or a few demonstrations of the task and is then expected to complete further instances of the task simply by predicting what comes next.

Main concepts

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Main concepts

- **Fine-Tuning (FT)**
  - Involves updating the weights of a pre-trained model by training on a supervised dataset specific to the desired task.
- **Few-Shot (FS)**
  - Model is given a few demonstrations of the task at inference time, but no weight updates are allowed
- **One-Shot (1S)**
  - Is the same as few-shot except that only one demonstration is allowed
- **Zero-Shot (0S)**
  - Only given a natural language instruction describing the task

Obrigado

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