Part VI

Retrieval-free Approaches

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WebText: 8 million documents, excluding Wikipedia (!)

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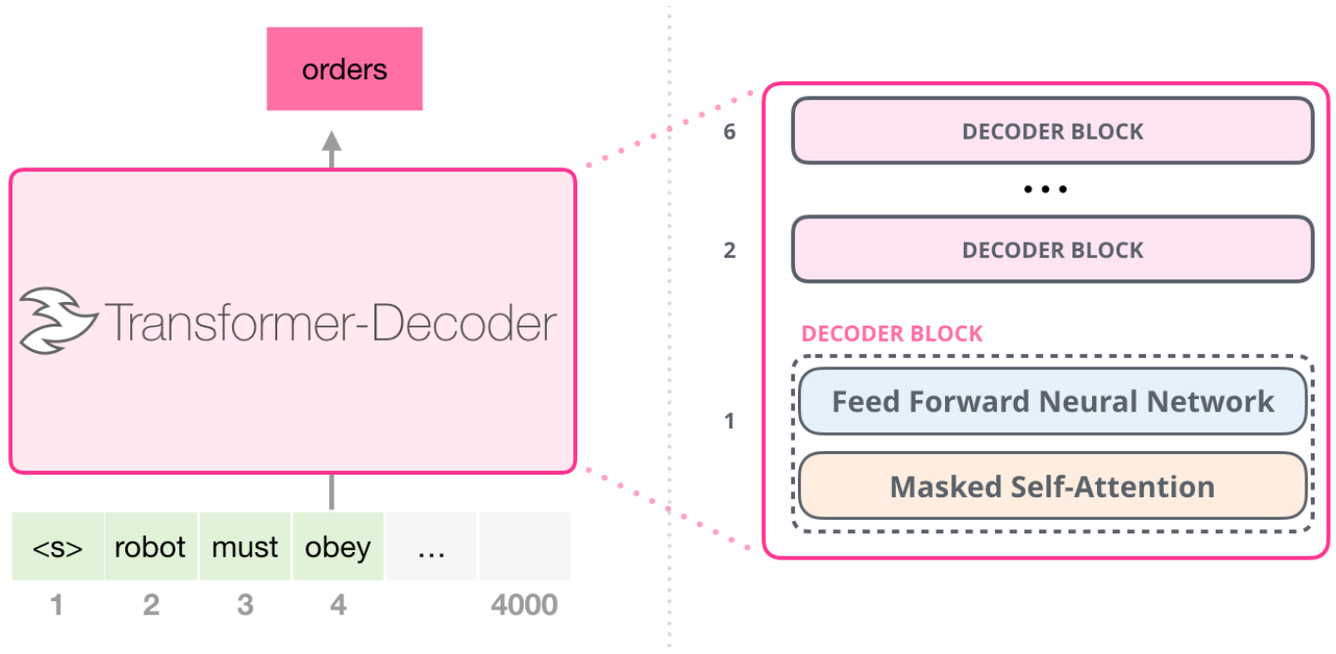

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GPT-2: zero-shot QA

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63.1% on the **1%** of questions it is most confident in

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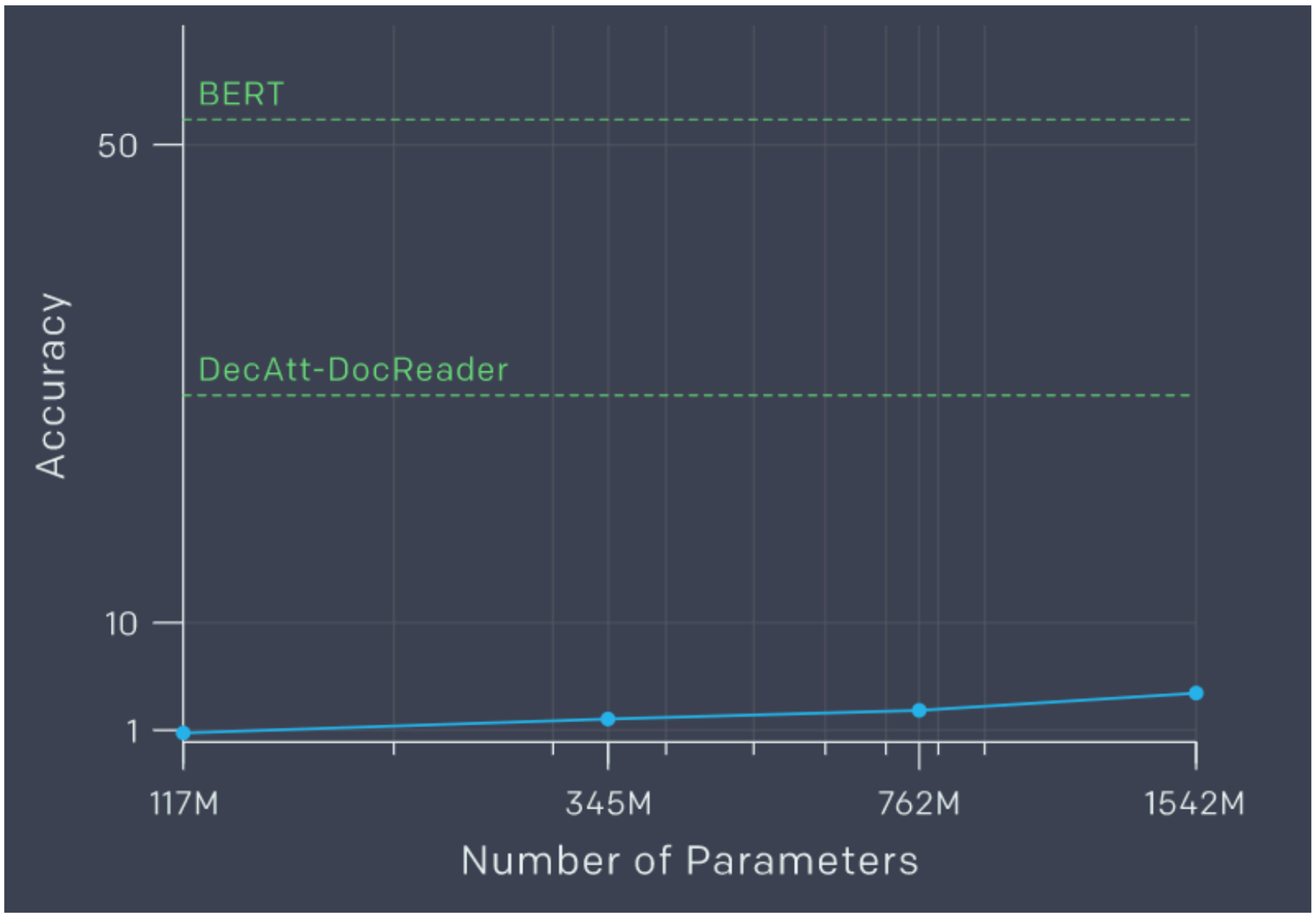

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96 layers, hidden size 12288, **175B** parameters

Larger corpora: Common Crawl + WebText + Books + English Wikipedia

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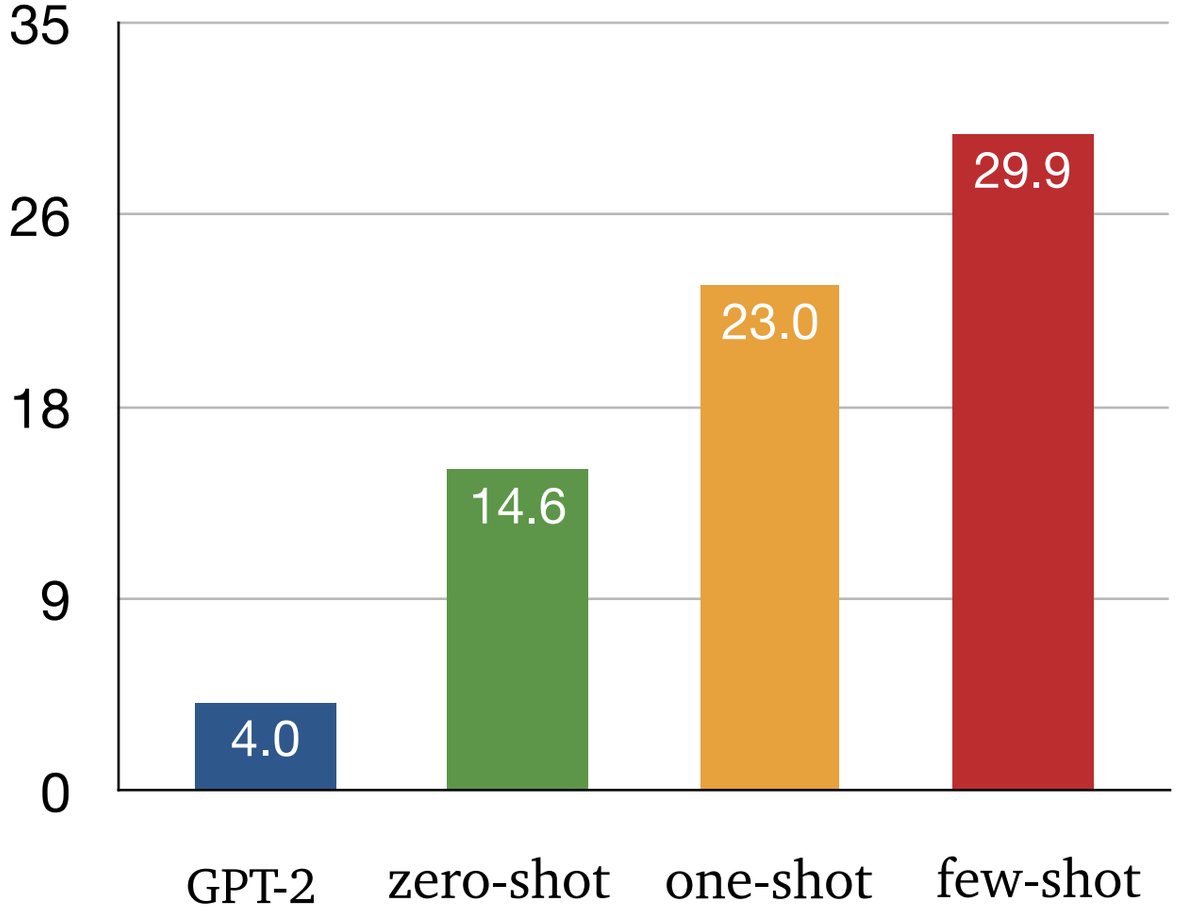

Few-shot learner

- No weight updates
- Only augment the prompt with **K** (question, answer) pairs as "demonstration"
- One-shot setting is a special case when only **one** example is given.

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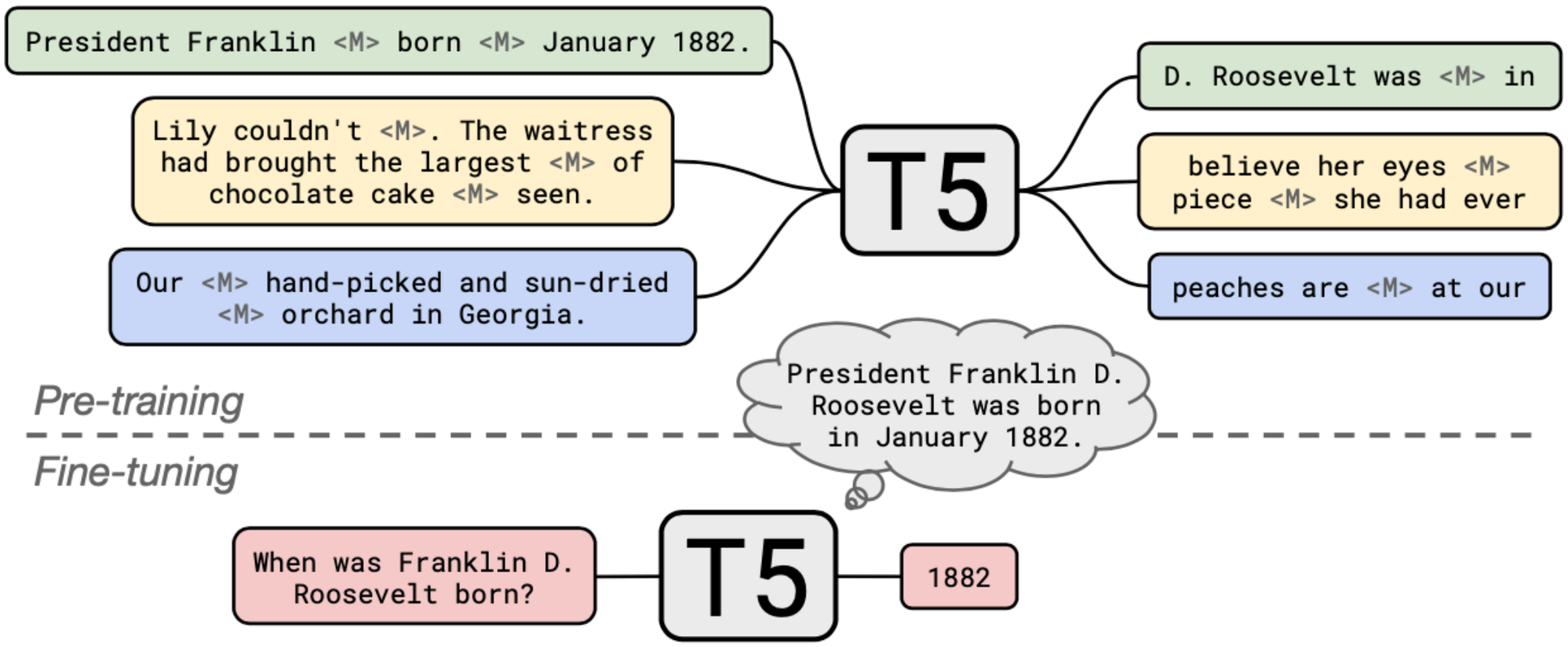

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		Natural Questions	WebQuestions	TriviaQA
		NQ	WQ	TQA
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	Min et al. (2019a)	28.1	–	50.9
	Min et al. (2019b)	31.8	31.6	55.4
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	Ling et al. (2020)	–	–	35.7
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	Karpukhin et al. (2020)	**41.5**	42.4	57.9
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	T5-11B + SSM	36.6	**44.7**	**60.5**

BERT-base = 110M parameters

SSM: salient span masking, pre-training data proposed in REALM

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Summary

- Large language models pre-trained on unstructured text can attain competitive results in open-domain QA without accessing external knowledge.
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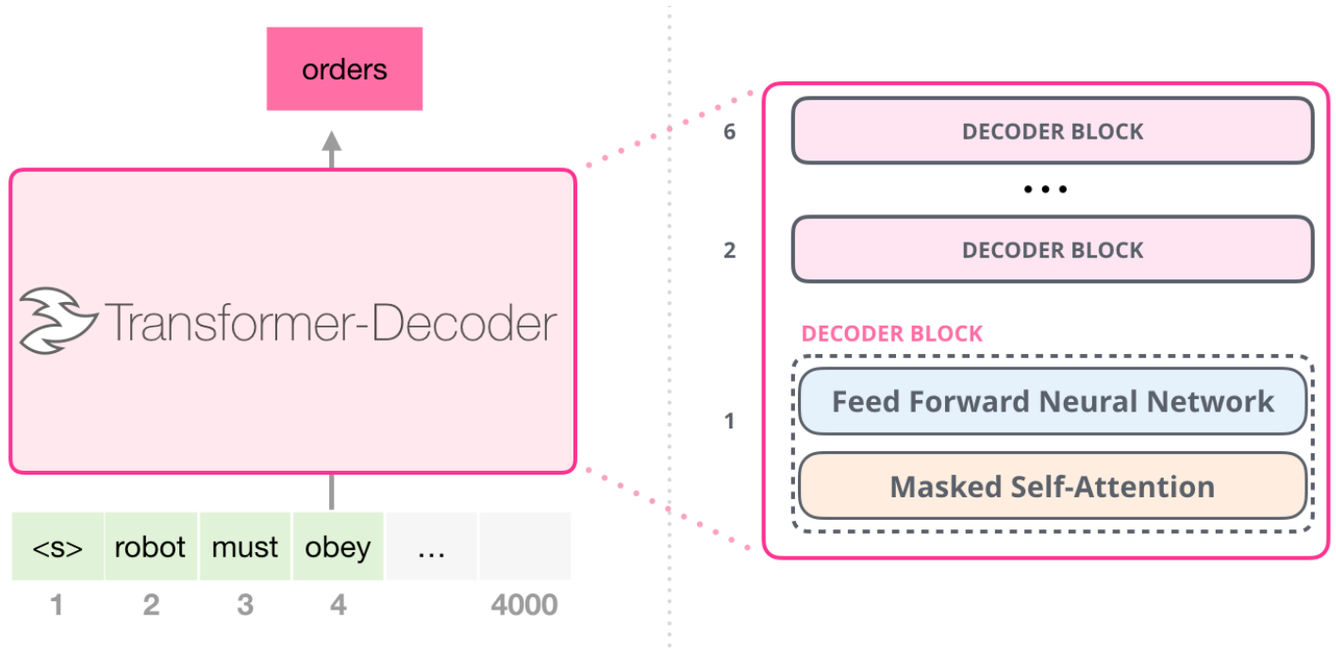

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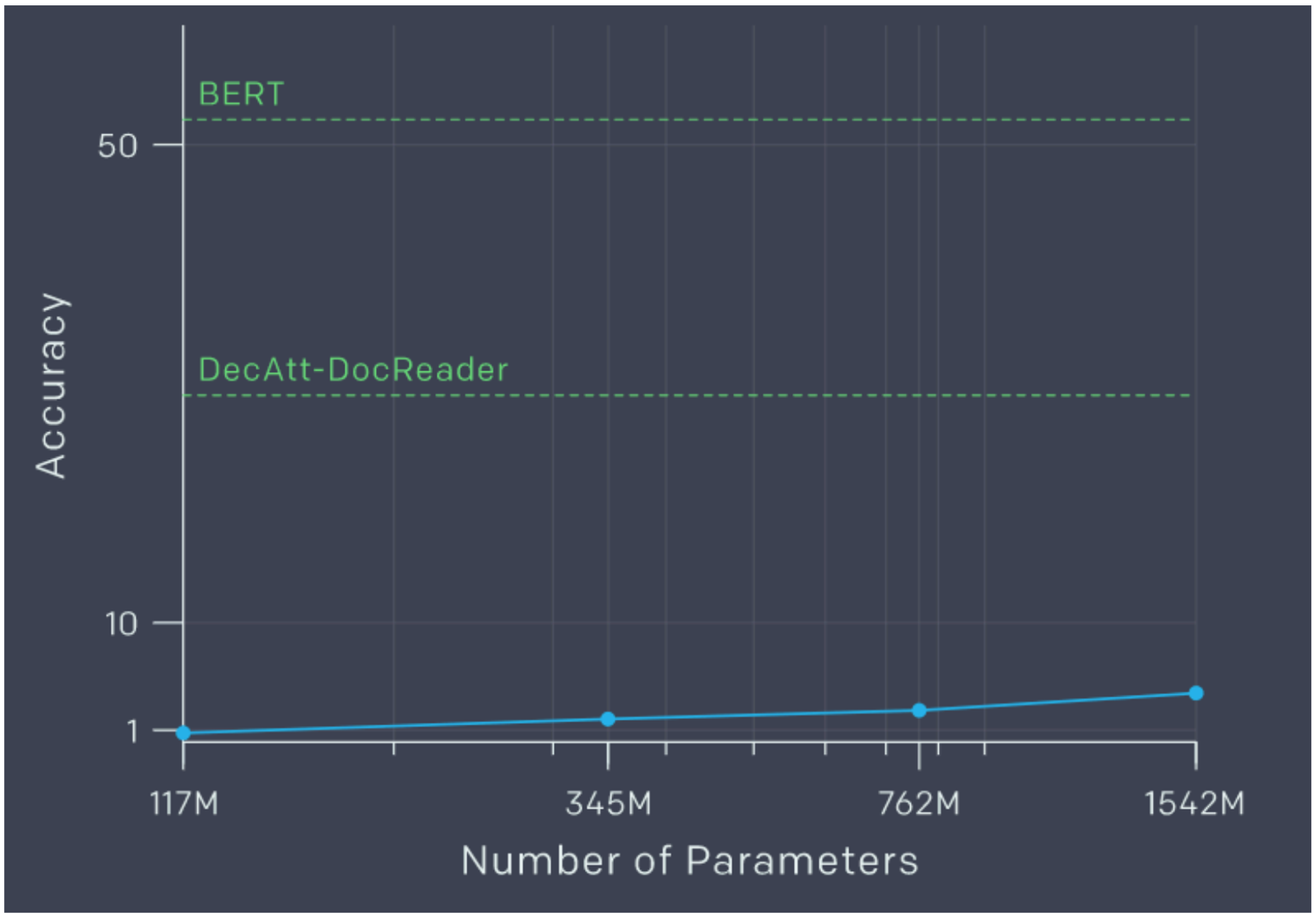

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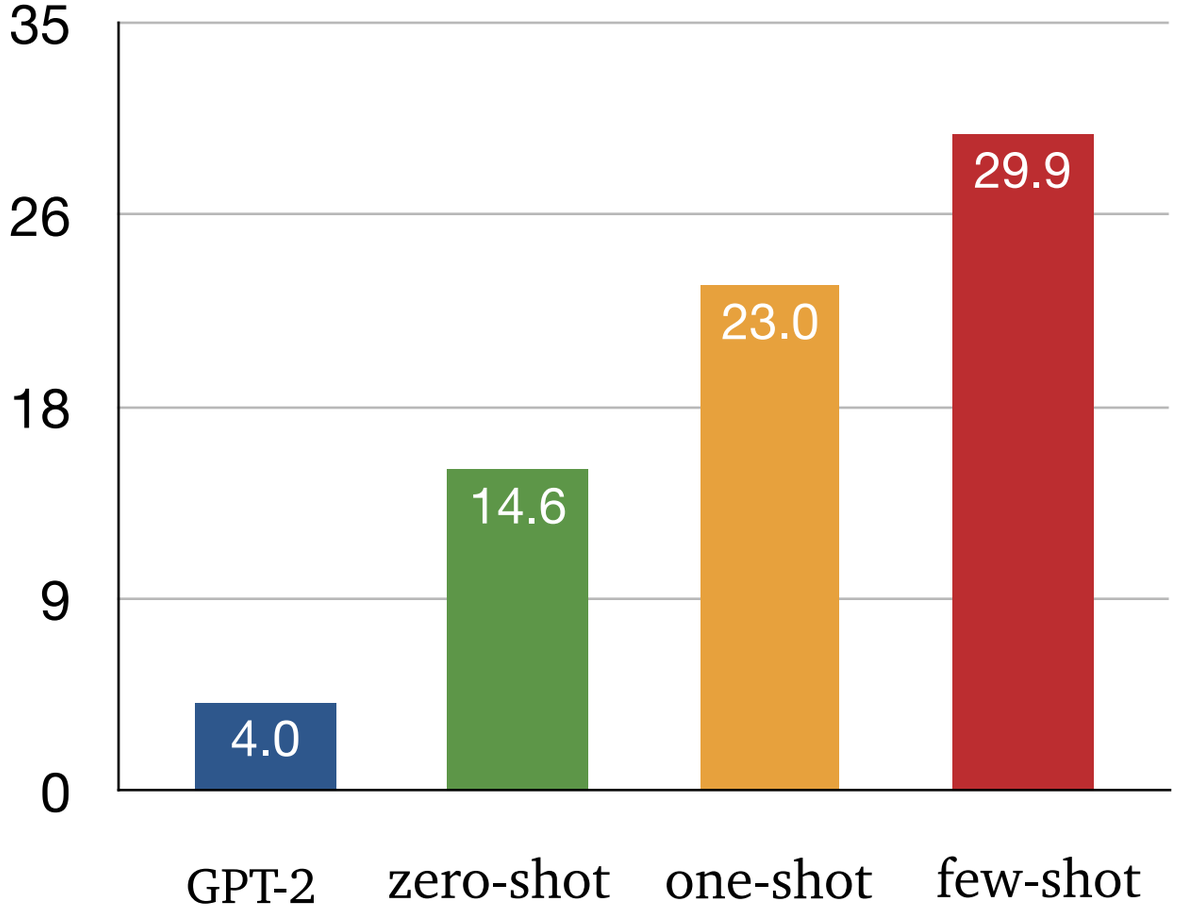

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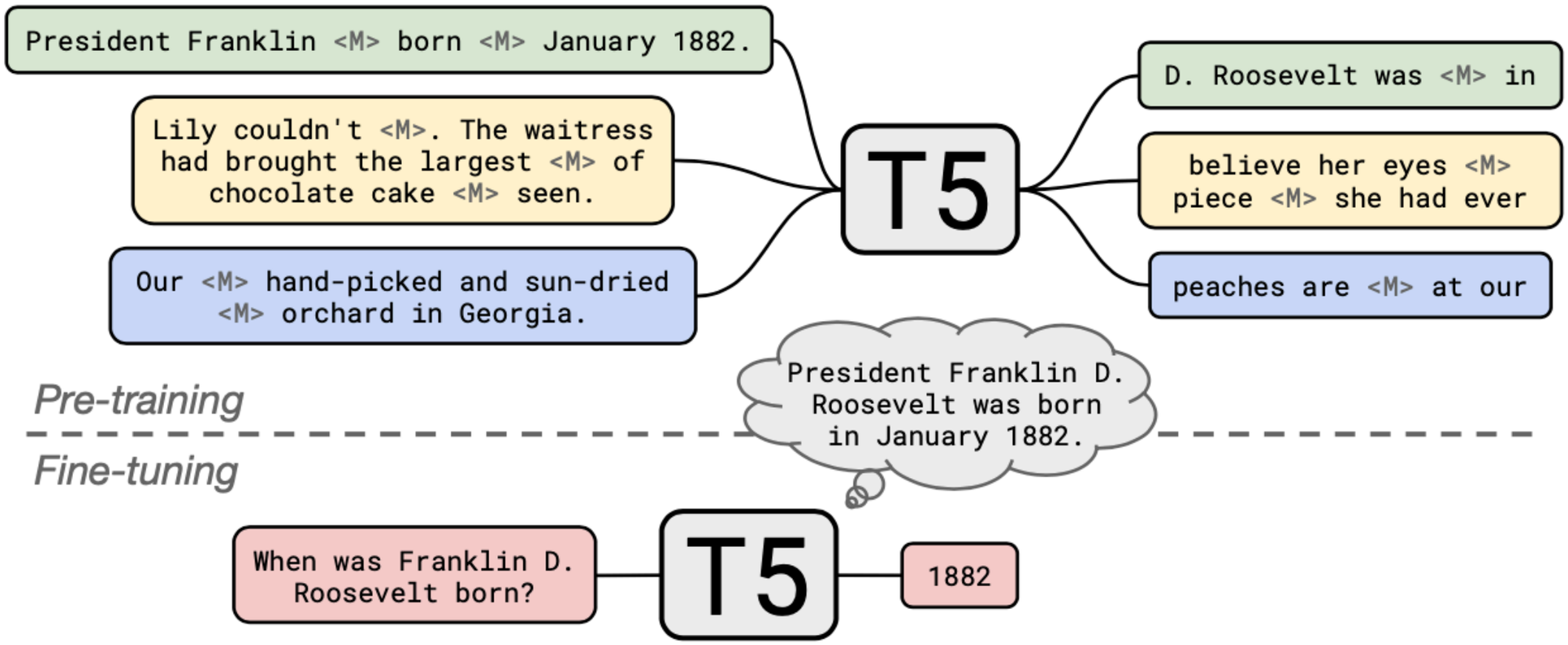

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