



面向统一低样本关系抽取的匹配预训练

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Pre-training to Match for Unified Low-shot Relation Extraction.

In Proceedings of ACL Volume 1: Long Papers,

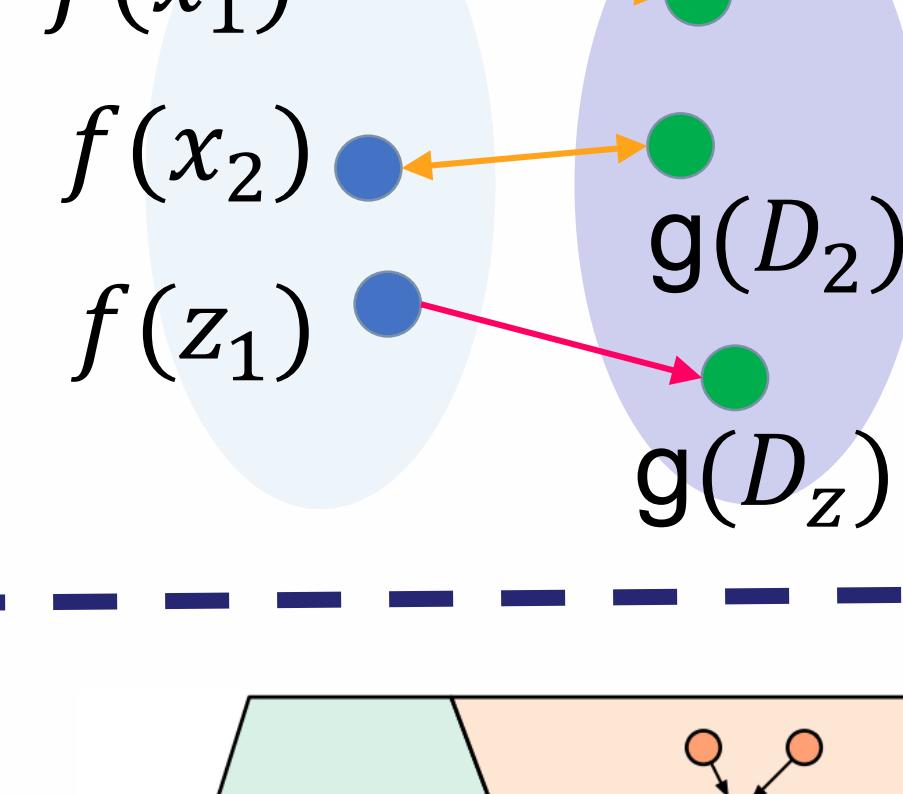
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低样本关系抽取

零样本关系抽取

- 无标注数据
- 仅有外部知识可用
 - 如, 类别标签
- 需要标签语义匹配能力



当前统一低样本学习的解决方案, 主要包括:

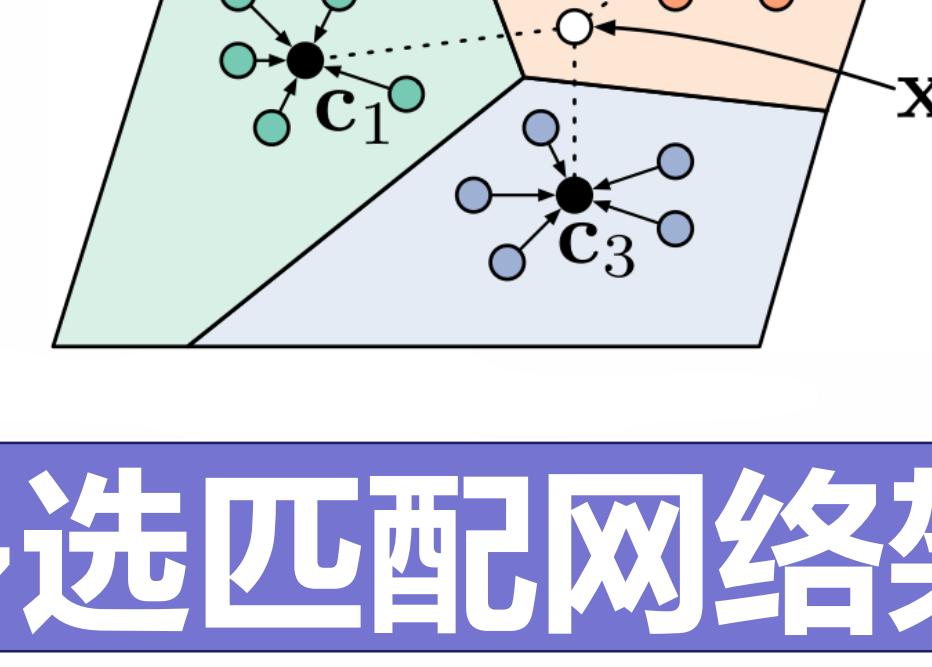
- 基于文本蕴含的方法
- 基于机器阅读理解的方法

但与关系抽取任务本身的差异, 导致:

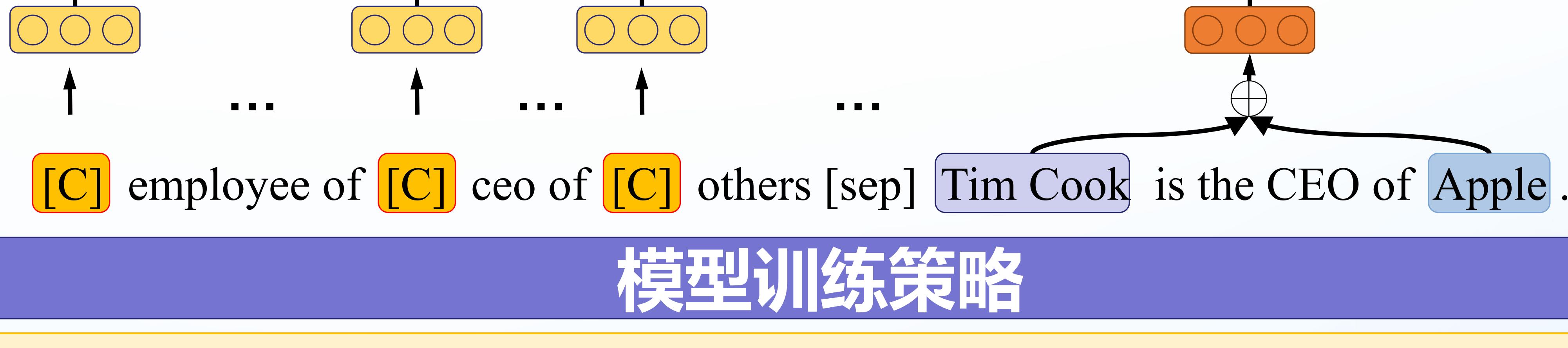
- 模型性能不理想
- 计算效率偏低
- 无法预测“其他”关系

小样本关系抽取

- 仅少量标注数据
- 外部知识非必须
- 需要实例概括和匹配能力

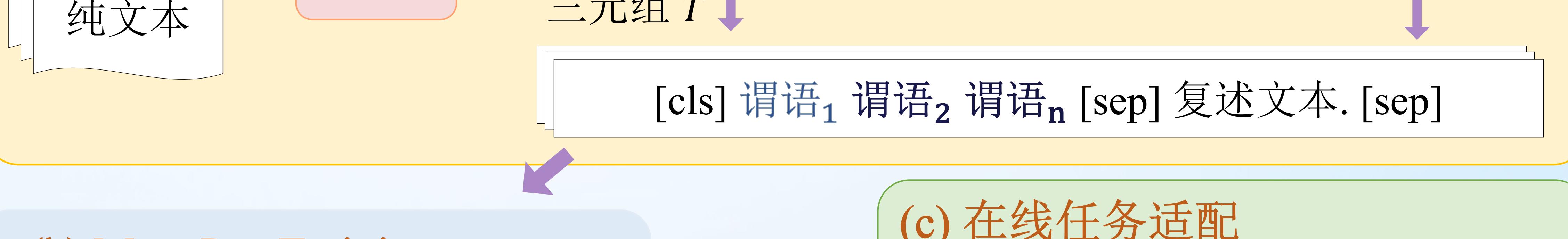


多选匹配网络架构 (MCMN)

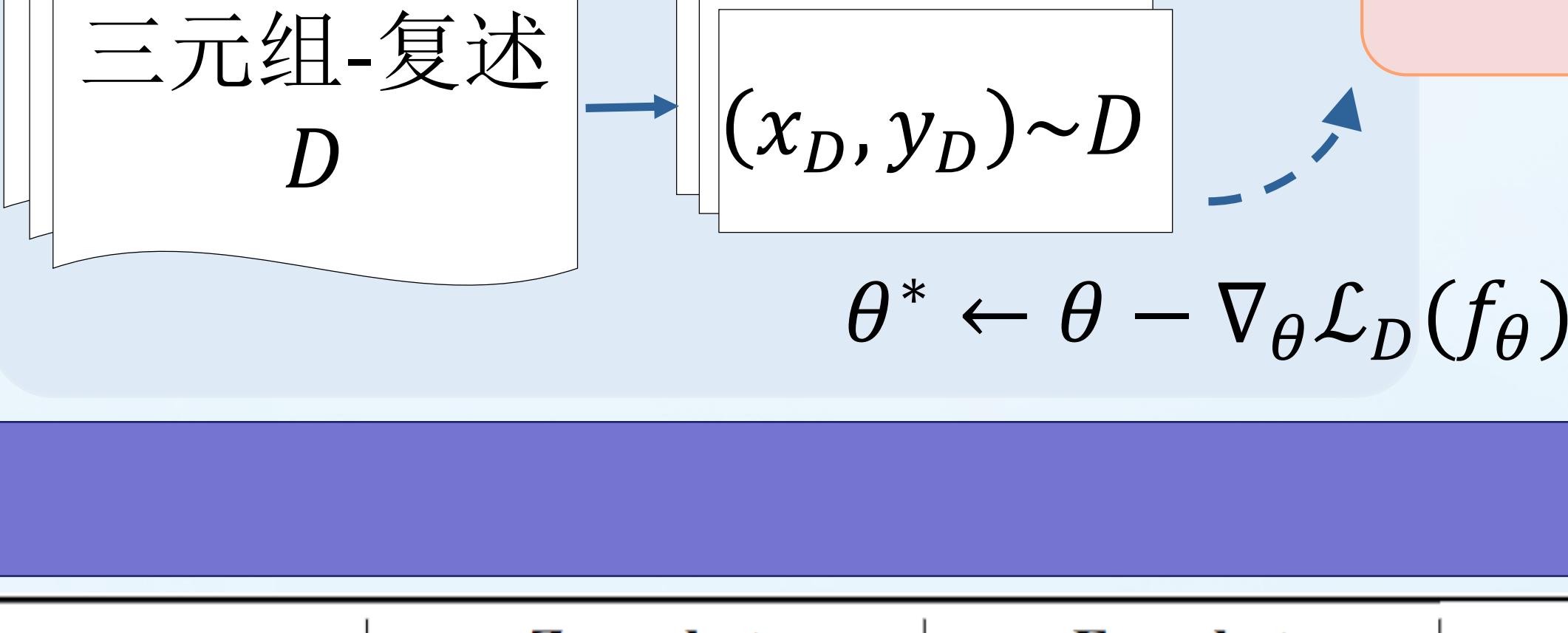


模型训练策略

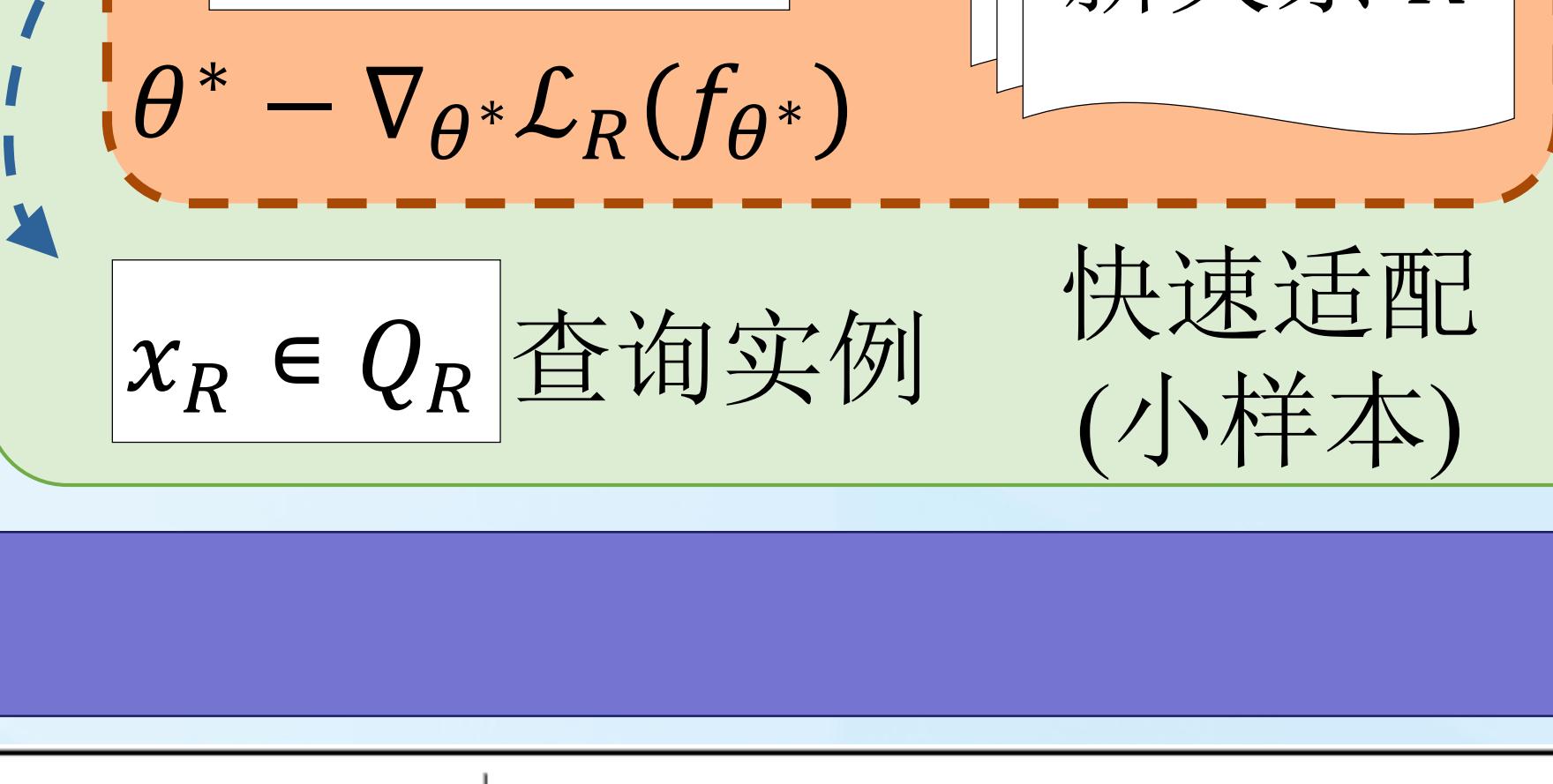
(a) 三元组—复述构建



(b) Meta Pre-Training



(c) 在线任务适配



实验

Model	Zero-shot		Few-shot		Avg.
	Acc. \pm ci.	Std.	Acc. \pm ci.	Std.	
UniFew	52.5 \pm 2.0	9.7	79.2 \pm 1.5	7.5	65.9
UniFew-meta	79.4 \pm 1.9	9.2	87.2 \pm 1.2	5.7	83.3
Our	66.6 \pm 1.7	8.7	74.4 \pm 1.5	7.6	70.5
Our-meta	82.9 \pm 1.3	6.6	87.4 \pm 1.2	5.6	85.1

Model	Few-shot with NOTA				Avg.
	5-1 0.15	5-5 0.15	5-1 0.5	5-5 0.5	
Proto (CNN)	60.59	77.79	40.00	61.66	60.01
Proto (BERT)	70.02	83.79	45.94	75.21	68.74
Bert-Pair	77.67	84.19	80.31	86.06	82.06
Our-meta	88.40	89.91	84.56	85.32	87.05

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