

Prompt Tuning

Instructor

Sourab Mangulkar

Machine Learning Engineer at 
Creator of  PEFT



Prompt Tuning

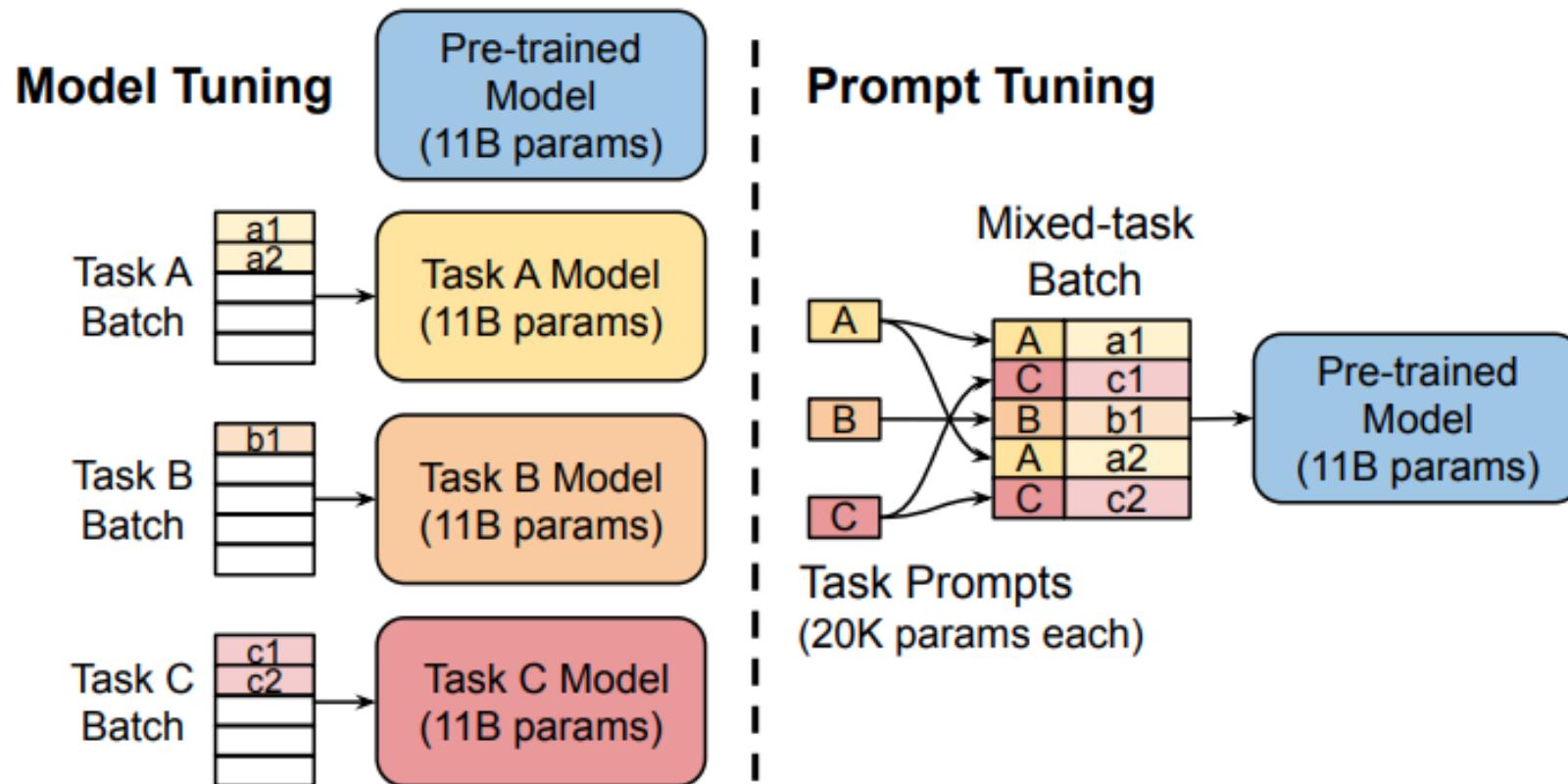


FIGURE EXPLAINING HOW PROMPT-TUNING WORKS FROM [ORIGINAL PAPER](#), FIGURE 2

Prompt Tuning

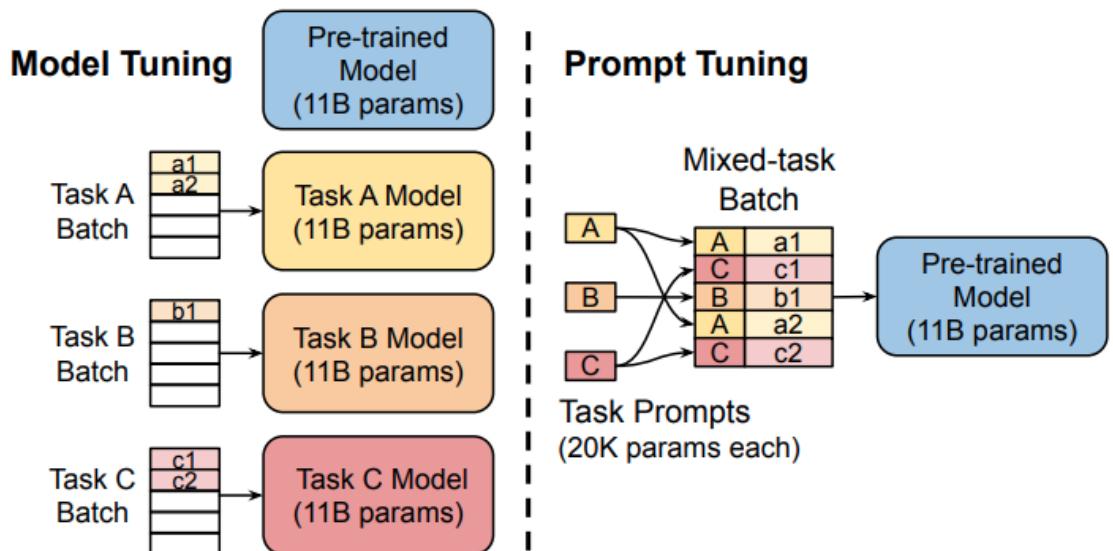


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```
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class PromptTuningModel(torch.nn.Module):
    def __init__(self, base_model, num_prompt_tokens, emb_dim, batch_size):
        super().__init__()
        self.base_model = base_model
        self.prompt_embedding = torch.nn.Embedding(num_prompt_tokens, emb_dim)
        self.prompt_tokens = (torch.arange(num_prompt_tokens)
                             .unsqueeze(0)
                             .repeat(batch_size, 1)
                             .long())

    def forward(self, inputs_embeds, **kwargs):
        # get the soft prompt embeddings
        soft_prompts = self.prompt_embedding(self.prompt_tokens)
        # prepend the soft prompt embeddings to input embeddings
        inputs_embeds = torch.cat((soft_prompts, inputs_embeds), dim=1)
        return self.base_model(inputs_embeds=inputs_embeds, **kwargs)
```