Analytics Vidhya

DPO and IPO

Instructor

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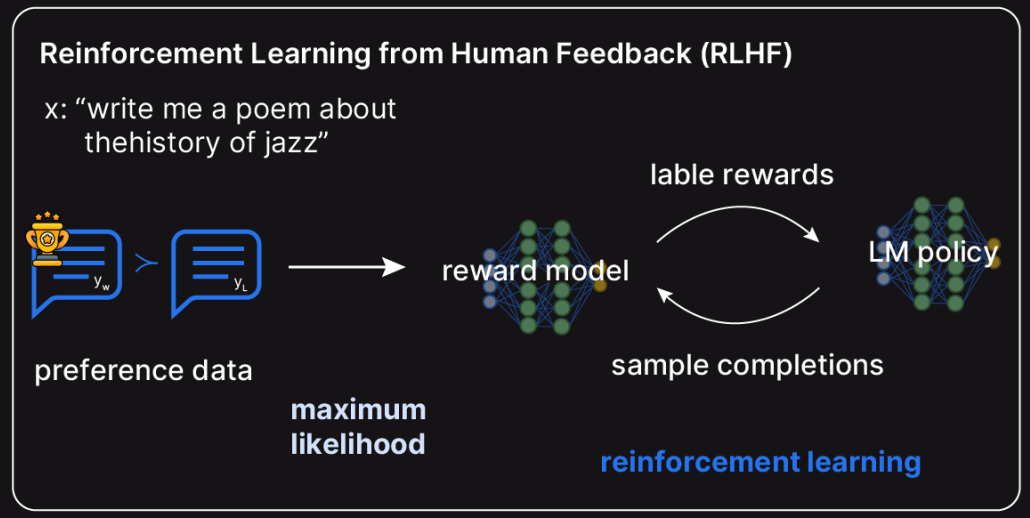
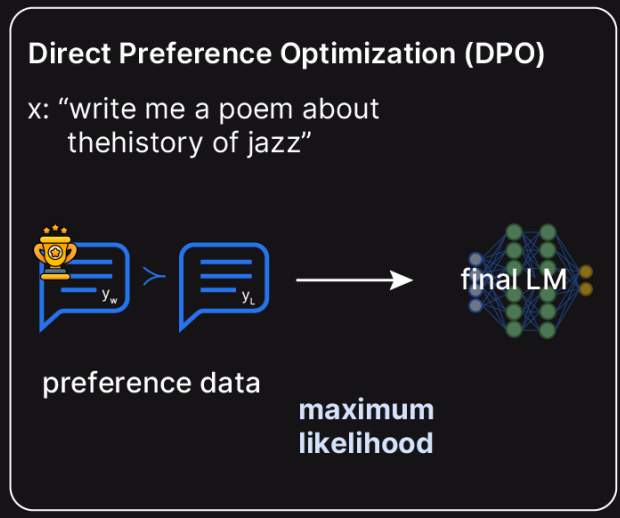
Challenges with RLHF

Complex and Unstable

DPO





Steps involved in DPO

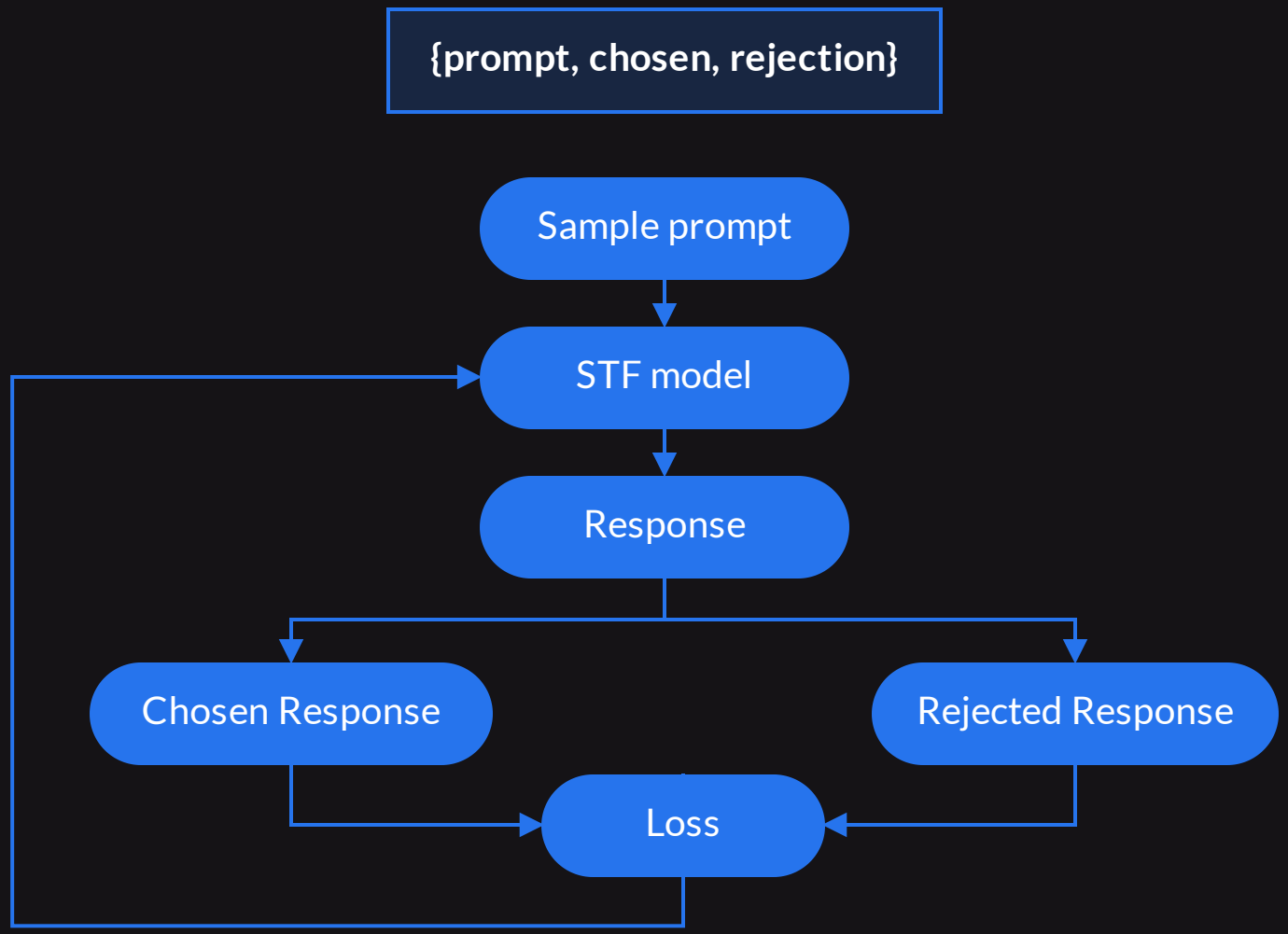
1. Collecting preference data

system string · *classes* 17 values	question string · *lengths* 22 8.05k	chosen string · *lengths* 1 4.95k	rejected string · *lengths* 5 7.95k
	You will be given a definition of a task…	[["AFC Ajax (amateurs)", "has ground", "Sportpark De Toekomst"], ["Ajax Youth Academy", "plays at",…	Sure, I'd be happy to help! Here are the RDF…
You are an AI assistant. You will be given a task…	Generate an approximately fifteen-word sentence…	Midsummer House is a moderately priced Chinese restaurant with a 3/5 customer rating, located…	Sure! Here's a sentence that describes all the…
You are a helpful assistant, who always…	What happens next in this paragraph? She then rubs…	C. She then dips the needle in ink and using the pencil to draw a design on her leg, rubbing it of…	Ooh, let me think! *giggle* Okay, I know…

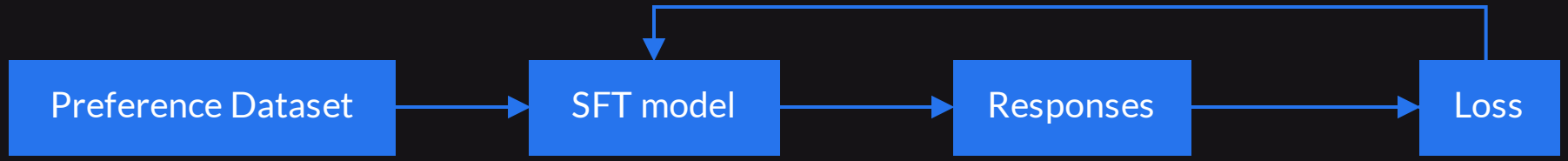
Steps involved in DPO

- Collect the preference dataset
- Finetune the LLM on the preference data with binary cross entropy loss

2.Finetune LLM on preference data



2.Finetuning SFT model on Preference Data



IPO

Regularized loss function

Thank You

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