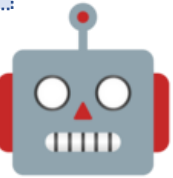


## Initial Model Training

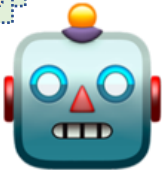
Sara wanted to do something for her sister who has cancer.  
Sara's sister lost her hair from chemo therapy.  
She gave the wig to her sister.

**Fine-tuned generation  
model on the  
generative dataset**



My mom and I had a big argument.  
H1: My Dad and I didn't talk for awhile.  
H2: My mom and I didn't talk for awhile.  
I finally called my mom and two of us reconciled.

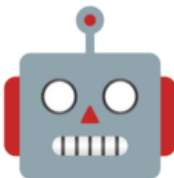
**Fine-tuned expert  
model on the  
discriminative dataset**



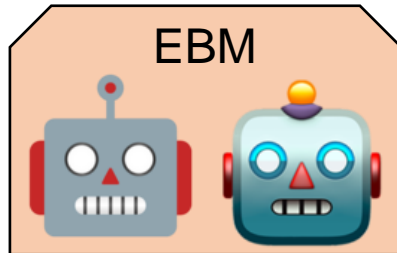
(A)

## EBM Training

Sara wanted to do something for her sister who has cancer.  
?  
She gave the wig to her sister.



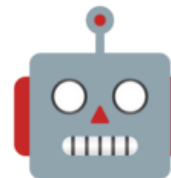
Sara's sister had cancer.  
Sara decided to make a wig.  
...  
Arnold was scared of big dogs.  
Arnold tried to run away from the dog.



(B)

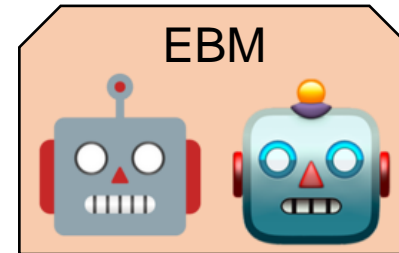
## Desired Model Training

Sara wanted to do something for her sister who has cancer.  
?  
She gave the wig to her sister.



**Update model by  
KL-Adaptive DPG**

Sara's sister had cancer.	.48
Sara decided to make a wig.	.98
...	
Arnold was scared of big dogs.	.76
Arnold tried to run away from the dog.	.89



**Give a score to the  
generated sentences  
from the optimizing  
model**

→ : Training  
→ : Inference

(C)