LLMs are SOTA chat evaluators.
Baby steps on top of simple prompts.

Three Ways of Using LLMs to Evaluate Chat

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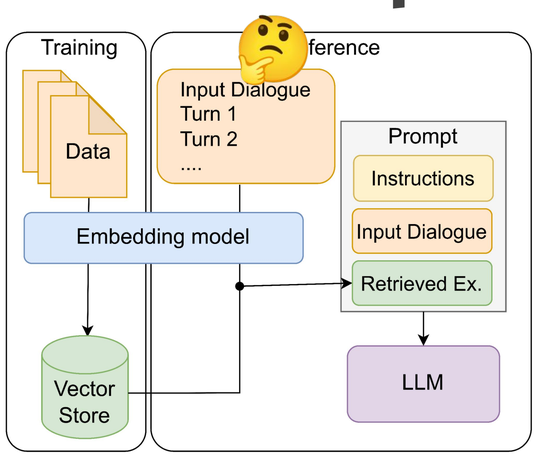
ÚFAL

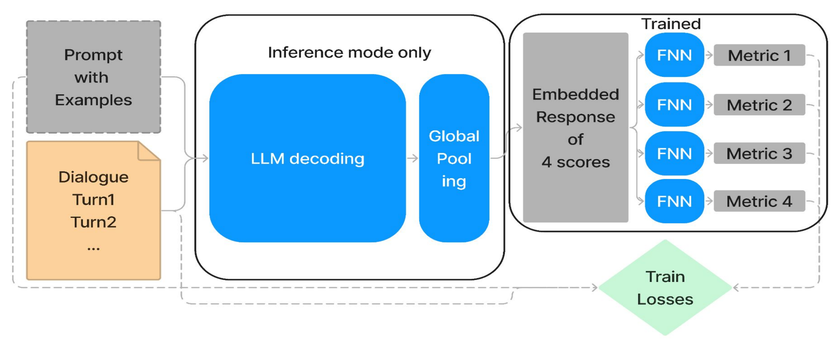
🦙 Prompts 🎉

- ❖ Trial and Error
- ❖ Single target metrics
- ❖ Examples of conversations
- ❖ Experiments:
  - *ChatGPT*
  - *Llama2*
  - *TkInstruct*
  - *OPT*
  - *GPT-NeoX*

Retrieve Examples?



LLM features? 😭



Ingredients

ChatEval DSTC11 Data

- ❖ **Target metrics** annotated **only for test set**
  Appropriatness, Content Richness, Grammaticality, Relevance
- ❖ Unclear target metrics for Training / Dev split
  - 👉 **Manual annotation** of target metrics for *156* rehearsal samples
  - 👉 **Heuristicly map existing datasets** in dev set to target metrics

ChatGPT1 Spearman

Dataset	Appr.	Rel.	Content
TEST-ALL	*0.488*	0.361	0.452
CHATGPT	*0.122*	0.060	0.181
DSTC10PERSONA	*0.803*	0.968	0.216
GPT3	*0.091*	0.007	0.242

Chat Turns	A	R	C
do you have any pets?	5	-	4
I am retired so I love to travel so pets would slow me down	4	4	4
I understand that my idea of traveling is a hot hot bubble bath	3	2	4
Yes I have dogs and cats I like to take them with me on trips	2	2	4

LLM Systems

Submitted

- ❖ TkInstruct, GPT-X, OPT, etc. poor performance
- ❖ **ChatGPT 3.5**-turbo-0301 turn robustness **second place**
- ❖ Regressor on top of LLM global pooled logits

Ablation

- ❖ **Llama2,** ChatGPT 3.5-turbo-0613
- ❖ Fixed prompts

Experiments

Conclusions

- 👉 Prompted LLMs better than previous SOTA
- 👉 Prompts: fomatting matters *orig-> impr ->norm*
- 👉 Examples useful for format specifications.
- ❖ Llama2-7b-chat close to ChatGPT-turbo-0613
- ❖ Dynamic examples may be inferior.
  Future: Combine dynamic and preselected?
- ❖ Future: Add (QLoRa) finetuning?

Results

Best Submitted Avg. Spearman cor. coef.

system	Avg. Spearman
Baseline(Zhang et al., 2020)	0.3387
Winning submission (team4)	0.4890
ChatGPT + Vector Store (ours)	0.4190

Approprietness Spearman cor. coef.

system	Spearman	%fail
Llama2-Pnorm	0.3914	0.98%
Llama2-Pnorm-fix-2egs	0.3551	0.06%
Llama2-Pnorm-dyn-2egs	0.3756	0.65%
ChatGPT-Pnorm-dyn-2egs	0.5462	-
ChatGPT-Pimpr-fix-2egs	0.6136	0.00%
ChatGPT-Pimpr-dyn-2egs	0.5962	0.00%
ChatGPT-Porig-dyn-2egs	0.4880	-

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https://github.com/oplatek/chateval-llm

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