

# Knowledge Grounding in Retrieval-Augmented LMs Quick Update

Martin Fixman et. al

City, University of London

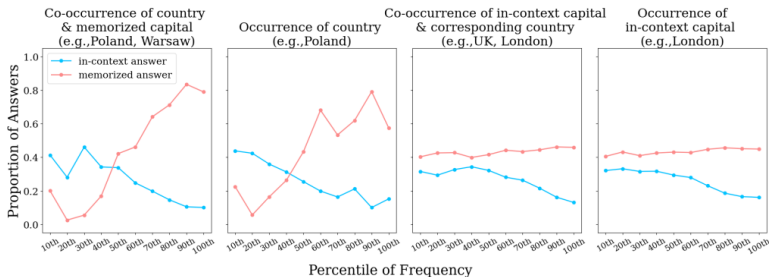
6 September 2024

# Reading List

## “Characterizing Mechanisms for Factual Recall in Language Models”

Yu et. al

*Thanks Chenxi*



# Reading List

“Language Models are Few-Shot Learners”

Brown et. al

“Large Language Models Struggle to Learn Long-Tail Knowledge”

Kandpal et. al

“What makes in-context learning work?”

Min et. al

## New models

Currently experimenting with new models.

**Flan-T5** An encoder-decoder Seq2Seq model.

**Atlas Flan T5** fine-tuned with index data.

## Technical issues

Some technical problem on calculating cross-entropy.

Description of these challenges will be a good part of the written report!

## Fine-tuning out hypothesis

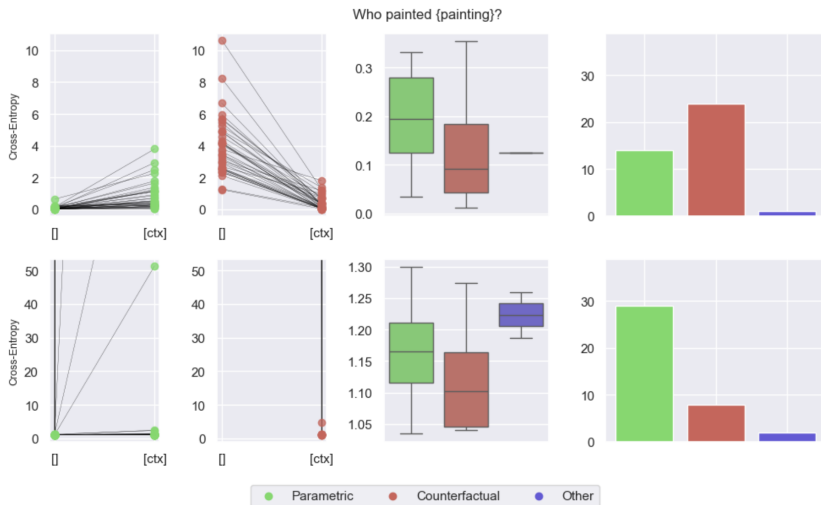
*Can we predict whether the result from a query with added context came from parametric knowledge, or from the original context?*

*Does this change depending on the model? Is there a “best” model for preferring contextual knowledge?*

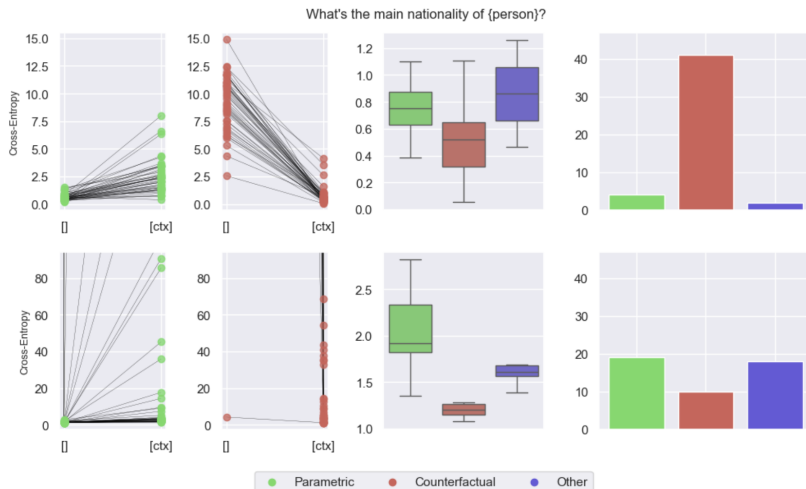
*Does this depend on which question is being answered?*

(Work in progress)

# More results (now a bit more understandable)



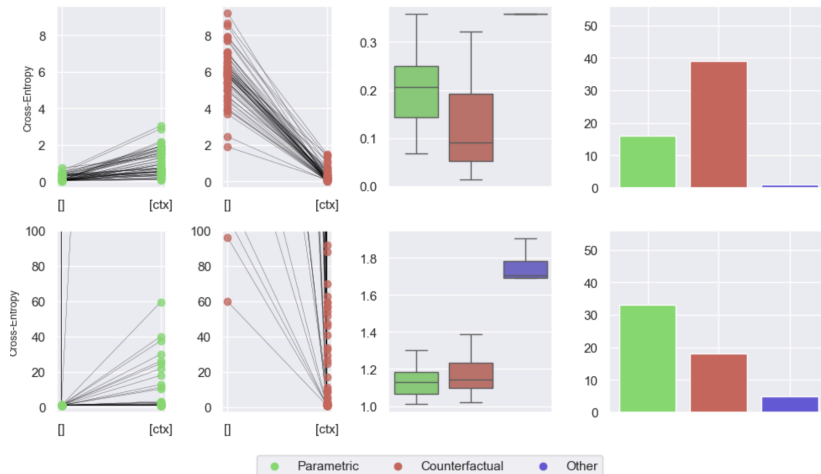
# More results (now a bit more understandable)



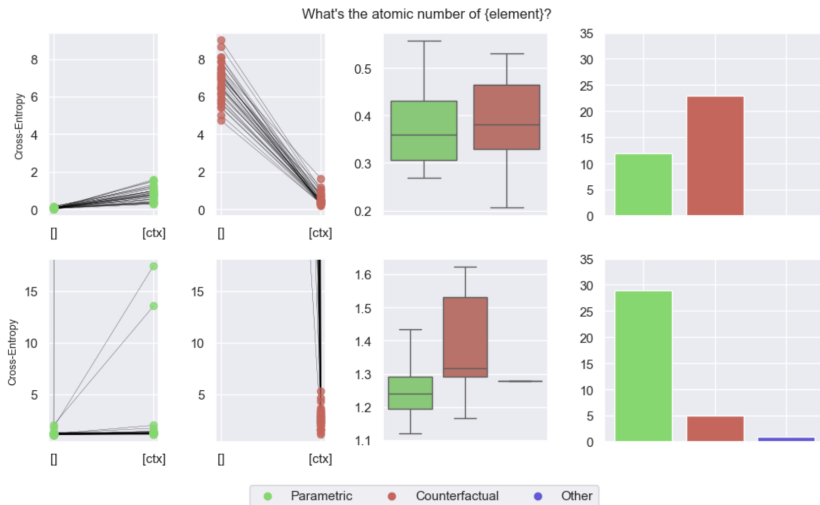


# More results (now a bit more understandable)

What year did {historical\_event} happen?



## More results (now a bit more understandable)



Any questions?

# Any Questions?