Project Proposal and Literature Review

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1 Project Proposal

1.1 Description

The use of Large Language Models (LLMs) by end users have significantly increased since the announcement of the ChatGPT by OpenAI, this use increase can lead to spread of miss information if the model hallucinate and the user don't search in multiple sources.

The objective of this project is to reduce the hallucination of the LLMs with knowledge injection from Knowledge Graphs such as DBPedia and benchmark the performance of the enriched LLMs.

1.2 Goals

To improve the factual quality of the generated text it is necessary to inject the knowledge in the inference pipeline, in this project two methods will be used.

The first one is user input enrichment, before feeding the input to the model it is introduced data from the knowledge graphs using keywords present in the input.

The second method involves injecting the data directly in the model, different approaches exits to accomplish this but the objective is to use a pre-trained model and use a adapter based architecture.

In order to evaluate the quality of the solutions, first they will be compared with the model without the architectural modifications and in a question answering benchmark.

1.3 Checkpoints

1. October 29
2. November 19