Review: Large Language Models

The Language Modeling task is to extend a sequence of words with the likely next word.

This process can be repeated, resulting in the generation of complete stories from a short "seed" of a few words.

Language Models are the basis for a great deal of the current revolution in Generative AI>

Language Models: the future (present?) of NLP?

The Language Model objective is a simple NLP training objective.

However, it seems to result in models that have the ability to easily adapt to solve *other* objectives.

This leads to a new paradigm called Pre-training + Fine-Tuning

- train a large model, on lots of data, using the Language Model objective
- Fine-tune this model on a small number of examples from a new Target Task

Let's learn about this objective and some of the models that have been trained using it.

- <u>Language Models (NLP Language Models.ipynb)</u>
- <u>Large Language Models (NLP Large Language Models.ipynb)</u>

In-context Learning

In addition to a Large Language Model easily adapting to a new task via Fine-Tuning

- LLM's seem to have the ability to solve new Target tasks
- without further training (Fine-Tuning)
- just by being show instances of examples for the new task at inference time

This is called *In-Context Learning*.

- In-Context Learning (In Context Learning.ipynb)
- PreTrain Prompt Predict (NLP Beyond LLM.ipynb)
- From LLM to Bing Search (From GPT to BingSearch.ipynb)

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In [2]: print("Done")
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