Project Notes

Resources:

* <https://magazine.sebastianraschka.com/p/finetuning-large-language-models>
* Sebastian LORA: <https://magazine.sebastianraschka.com/p/practical-tips-for-finetuning-llms>
* HF LORA: <https://huggingface.co/docs/peft/main/en/conceptual_guides/lora>
  + HF PEFT: <https://github.com/huggingface/peft>
* Lighting AI LORA experiments: <https://lightning.ai/pages/community/lora-insights/>
  + <https://lightning.ai/pages/community/tutorial/lora-llm/>

Datasets for LORA finetuning:

* SMS spam: 4825 ham, 747 spam
  + <https://archive.ics.uci.edu/dataset/228/sms+spam+collection>
* 50K IMDB Movie Review Dataset: <https://ai.stanford.edu/~amaas/data/sentiment/>
* The Alpaca dataset for instruction fine-tuning contains 52,000 instruction–response pairs.
  + <https://github.com/tatsu-lab/stanford_alpaca>
  + Same as Alpaca dataset but this time the data is generated from GPT4: <https://github.com/Instruction-Tuning-with-GPT-4/GPT-4-LLM/tree/main>
* LIMA: Less Is More for Alignment, Zhou et al., <https://arxiv.org/abs/2305.11206>
  + 1000 examples. [GAIR/lima · Datasets at Hugging Face](https://huggingface.co/datasets/GAIR/lima?row=0)

Data to pre-train LLM

* <https://github.com/Zjh-819/LLMDataHub>
* [teleprint-me/phi-1 · Datasets at Hugging Face](https://huggingface.co/datasets/teleprint-me/phi-1?row=6)

GPT2 architecture resources:

* <https://jalammar.github.io/illustrated-gpt2/>
* [openai/gpt-2: Code for the paper "Language Models are Unsupervised Multitask Learners"](https://github.com/openai/gpt-2)
* [huggingface/transformers: 🤗 Transformers: State-of-the-art Machine Learning for Pytorch, TensorFlow, and JAX.](https://github.com/huggingface/transformers)
* [GPT-2 Detailed Model Architecture | Medium](https://medium.com/@hsinhungw/gpt-2-detailed-model-architecture-6b1aad33d16b)