

DOCUMENTATION

FINE TUNING PROCESS

The fine-tuning process involved adapting a pre-trained GPT-2 model for sales representative response generation. Using the Transformers library, the model and tokenizer were initialized from the "gpt2" checkpoint. A custom dataset was created using ChatGPT and Claude, formatted to teach the model appropriate response structures. The training configuration used 60 epochs with a batch size of 4, saving checkpoints every 10,000 steps. A TextDataset and DataCollatorForLanguageModeling were employed for efficient data handling. After training, the fine-tuned model and tokenizer were saved for future use. A custom function was created to generate responses for new customer objections, incorporating example interactions to guide the model's output. This process aimed to create a model capable of producing contextually appropriate sales responses, though further optimization of hyperparameters and evaluation methods could potentially enhance performance.

CHALLENGES

- 1) The dataset was so small that it became impossible to train the new model over it, thus I had to utilise a dataset of around 30 conversations to receive optimal results.
- 2) Checking the change in perplexity for the fine-tuned model with respect to different epochs and learning rates took a significant amount of time, as I was getting a poor result when I had set a low value for the epochs.