Prompt Engineering

Principles

1. Write clear and specific instructions
   - Prompt: summarize the text between triple backticks ``` ```
   - Avoids prompt injection
   - Ask for structured output: output in JSON/HTML
   - Check all the conditions/assumptions in task
   - Few Shot Prompting: give examples of successful answers

2, Give the model time to think
   - Break the task into multiple steps
   - If the original task is to judge the correctness of an answer, instruct the model to find its own solution and compare the answer to that

Iterative process
- Modify the prompt to keep getting closer to the desired result
- Similar to training a machine learning model

Model Limitations
- Hallucinations: make statements that sound plausible but not true. the model has skimmed thru the training set but has not memorized it.
- To reduce: Instruct the model to first find relevant info. then answer the question based on the relevant info

Tasks

Summarization
- Context matters: summarize for shipping department
- Create a list to run a single prompt on multiple data sets

Inferring
- Sentiment Analysis
- Topic Modeling
- Zero-shot learning algorithm: determining whether certain topics are covered in a text

Translation
- Translating from one programming language to another
- Formal and Informal
- Grammar

Expanding
- Temperature: allows more variability
- 0: low variability -> get same results everytime

Chatbot