Assembling Prompts

Anatomy of an engineered outcome
Administrative Details - 1 (LLM Credits R Us)

- Get your Baseten credits
  - [https://app.baseten.co/signup/](https://app.baseten.co/signup/)
  - [GPT vs. Mistral: Migrate to open source LLMs seamlessly](#)

- Get your Anthropic credits
  - Check your inbox for an invite that arrived on Jan. 25

- Get your OpenAI credits
  - [https://forms.gle/7FKhMqbUdKgknuUQ7](https://forms.gle/7FKhMqbUdKgknuUQ7)

- Invite github user cs224g to your GitHub repo
We welcome feedback!

We received 2 important feedback messages last week

1. More hands on “Show us” content
   - Today we’ll give an example of a prompt in production
   - Discussion of how it fits the context model we described earlier

2. More technical content
   - A lot of people in the class are familiar with high level concepts
   - Want to to dig in deeper into the specifics

We’re switching to more dynamic content in upcoming lectures
Administrative Details - 3

- Feb. 1, Sprint Checkpoint
  - Each team shares a URL of a slide or two describing progress
  - Send it to us in advance – By 9AM Thursday morning at the latest!
  - Early birds get to present sooner
  - 3 minutes to say what you’ve done, report any interesting results
  - Demo a prompt for extra credit
Baseten live demo and Q&A

Thanks to Varun Shenoy for kicking off our guest speaker series today!
Assembling a Successful Prompt

- Provide key context
- Succinctly describe task
- Express precisely the answer format
  - Ensure all expected outcomes are welcome and equally valued
A Prompt in Production - 1

You are an experienced technician, helping clinics organize incoming requests for services.

The following text delimited by triple tildes is one page of several that describe services a person will receive.

- Situate the LLM in its internal world model, person model
A Prompt in Production - 2

Classify the text as coming from one of the following six parenthesized categories of pages

(insurance card scan, order form, medical history, cover sheet, blank, other)

● The task itself, succinctly stated, leaving no room for misinterpretation
A Prompt in Production - 3

You know that:

1. insurance card scans contain an insurer name, various IDs, and prices
2. order forms are set up to select among several similar services
3. a medical history will contain symptoms, diagnoses, procedures, prescriptions

- Start with the most important categories
A Prompt in Production - 4

4. a cover sheet often contains little more than a title, a name and a number

5. a blank sheet has less than ten words, such as intentionally left blank, even no characters at all

6. other text fits none of the previous categories well.

- Eliminate largest categories of “false positives”
A Prompt in Production - 5

If the text has some form-like elements mixed in with another category, prefer the form category.

Choose the single best fit among the above six terms and answer precisely that page category name, with no preambles or disclaimers or extra words

~~~{page_text}~~~

- Offer a hint in case of ambiguity, and describe the output answer format
Detailed Discussion

● Order form pages go to a vision model for further processing
  ○ Manage costs, take advantage of cheaper OCR where possible
  ○ Extract page position information, handwritten form data

● Vision model output gets further validated against original OCR

● Earlier ranked items get higher priority

● Analysis is performed on key document types only
Leverage & Build Expertise while Iterating

● Ask the model to:
  ○ describe its context after providing representative samples of data
  ○ summarize, categorize and prioritize what it sees in data samples
  ○ express how it would constrain its output to the desired formats

● Make sure:
  ○ negative results are seen as acceptable even desirable
  ○ unexpected input data doesn’t throw off analysis
Conclusions

- Break up task if too many objectives (prompt chain)
- Start with more mechanical operations, i.e., chunking, classifying
- Eliminate sources of ambiguity and error
- Add additional validation prompts (supervisor) to review results
- Only embellish if needed after the essential criteria are met