

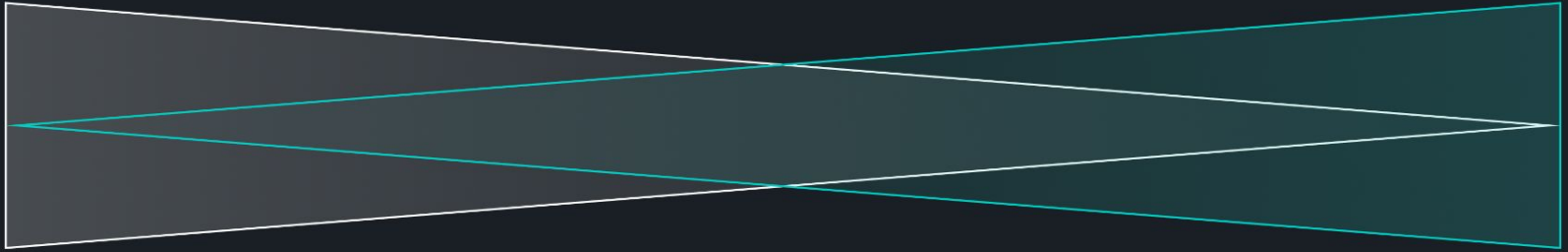
Model → ??? → Product

This is a talk about what happens in the middle



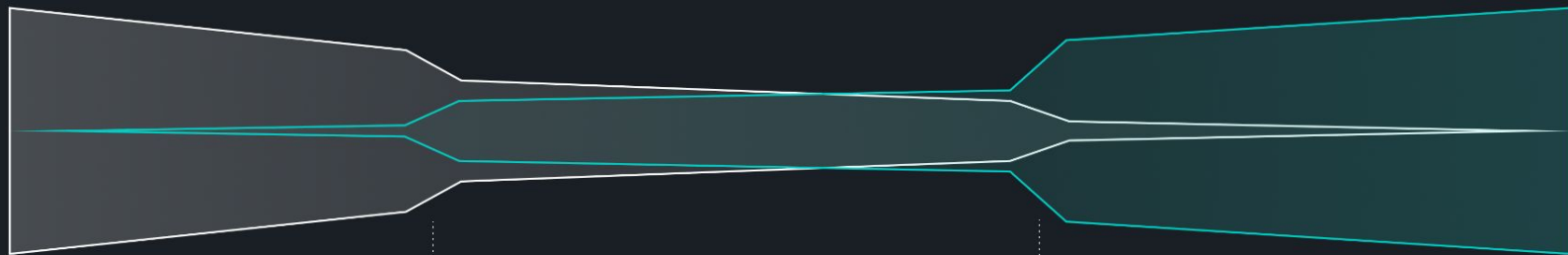
Tools

People



Tools

People



*deep  
learning*

*large language  
models*

# Demo!

*ceci n'est pas un  
product*



HI THERE, I'M

**Idan**

*(rhymes with: EE-dawn)*



🐦 idangazit

@ idan@vis.social

AND I WORK AT

**GitHub Next**



🐦 githubnext

🏠 githubnext.com

# Designing for intelligence

Patterns and practices for making products on top of AI

*Data Council • March 2023*



Untitled-1



Untitled-1 1 ●



```
1
2 # a function that queries a free webservice to get the weather
3 def get_forecast(zip_code):
4     import requests
       import json
       url = 'http://api.openweathermap.org/data/2.5/weather?zip=
       response = requests.get(url)
       json_data = json.loads(response.text)
       return json_data
```



⊗ 1 ▲ 0

Live Share

Quokka

Wallaby

LF

{ Python

3.11.2 64-bit



✓ Prettier











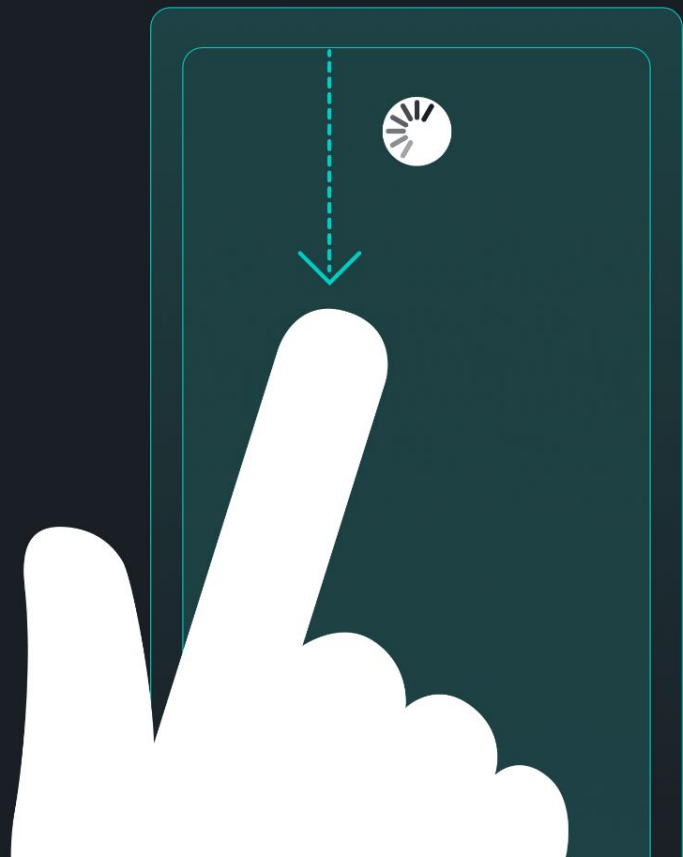
YOU ARE HERE  
*promising prototype*

sit amet, what kind of text am I? Lorem ipsum

1

---

*User Experience Considerations*

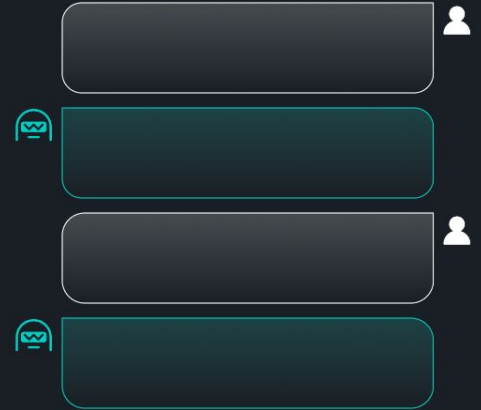




*optionality*



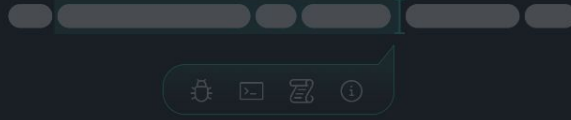
*transformation*



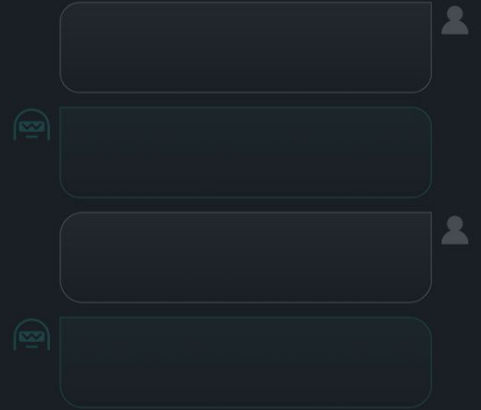
*iteration*



*optionality*



*transformation*



*iteration*

Untitled-1 1

```
1
2 # a function that queries a free webservice
3 def get_forecast(zip_code):
4
```

GitHub Copilot x

1 Synthesizing 4/10 solutions

2

3 =====

4

Accept Solution

```
5 def get_forecast(zip_code):
6     url = "http://api.openweathermap.org/dat
7     response = urllib.request.urlopen(url)
8     string = response.read().decode('utf-8')
9     weather = json.loads(string)
10    forecast = weather['weather'][0]['descri
11    return forecast
```

12

13 =====

14

Accept Solution

```
15 def get_forecast(zip_code):
16     # import the urllib.request module
17     import urllib.request
18     # import the json module
19     import json
20     # import the datetime module
21     import datetime
22     # construct the url for the request
```



1 0

Live Share

Quokka

Wallaby

Ln 1, Col 1

Spaces: 4

Python

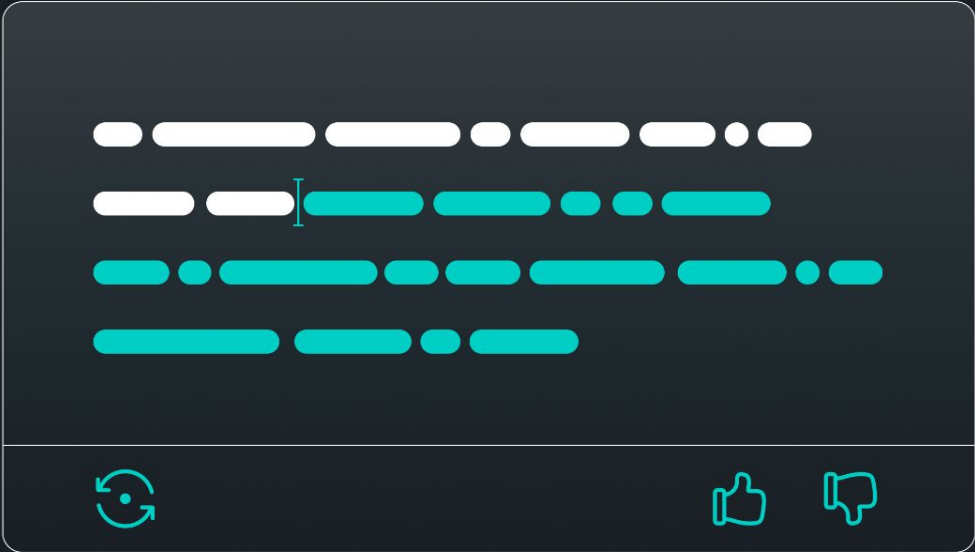
3.11.2 64-bit



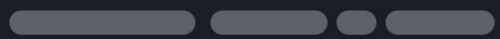
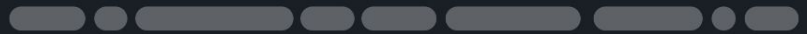
CodeQuote - No Matches

Prettier









design defensively for

# failure today

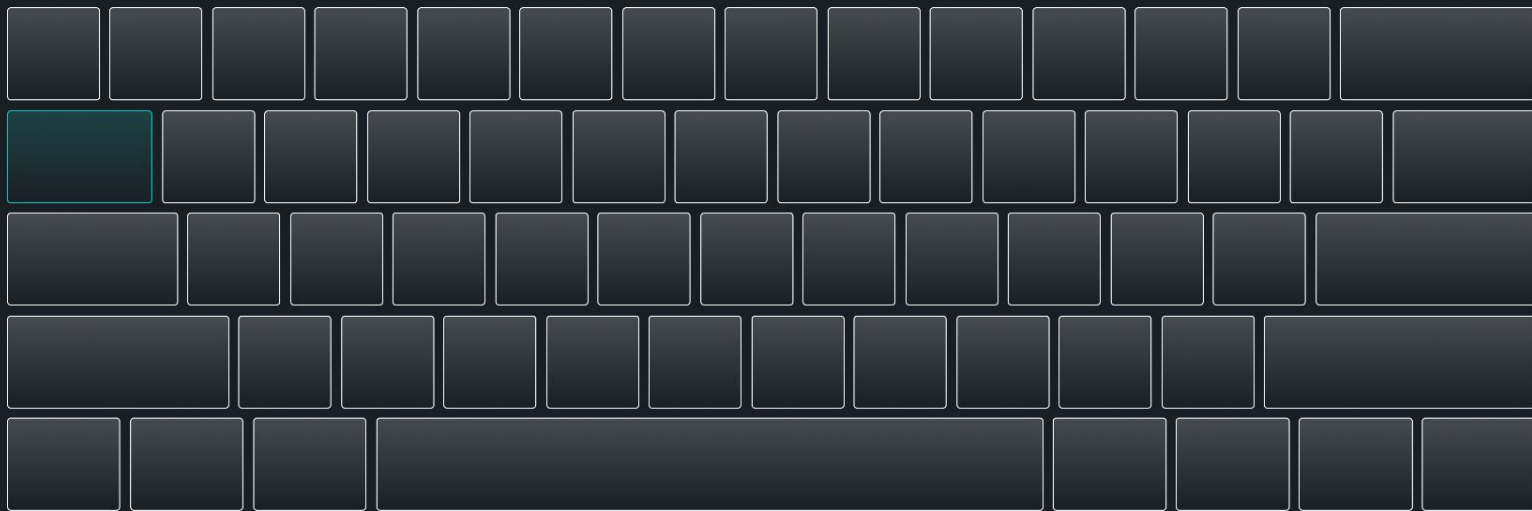
MAKE IT:

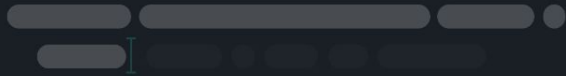
*Easy to ignore*

*Easy to retry*

*Modeless*

*Mutable*

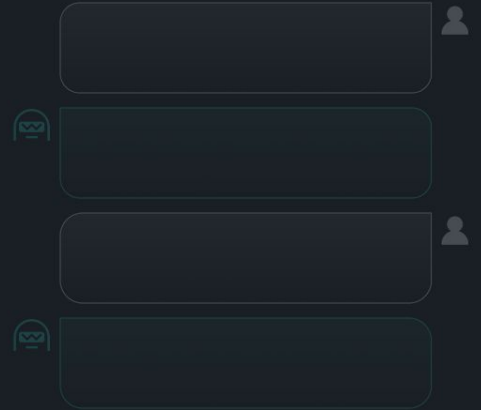




*optionality*



*transformation*



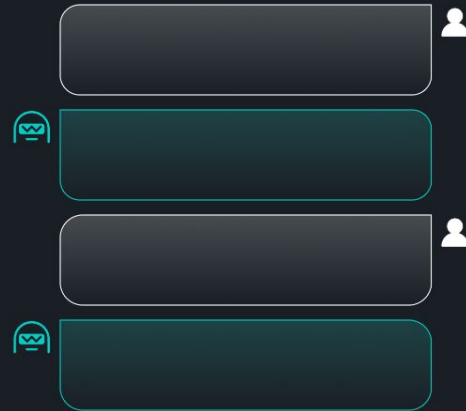
*iteration*



*optionality*



*transformation*



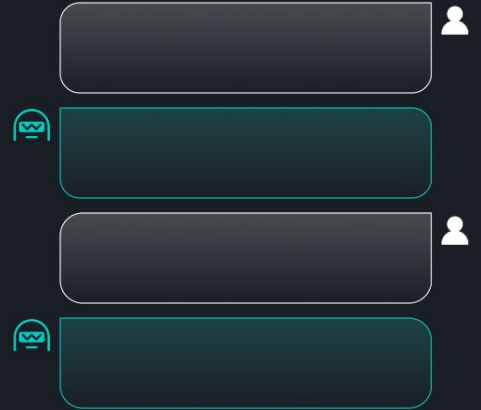
*iteration*



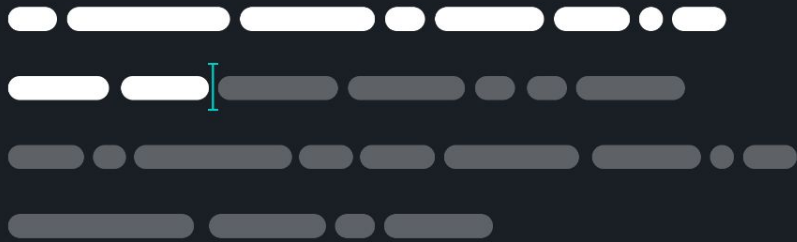
*create*



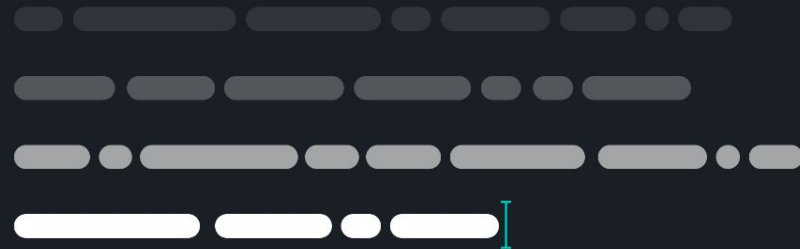
*edit*



*explore & plan*



*all at once*



*vs.*

*streaming*



- ○ ○ ○ ○
- ○ ○ ○ ○
- ○ ○ ○ ○
- ○ ○ ○ ○

**“Dearest LLM, could you perhaps...”**

**2**

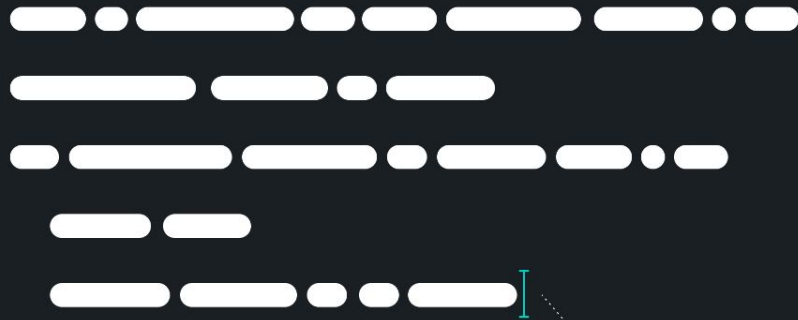
---

*Prompt Crafting/Engineering*

# engineering & crafting

*gathering, processing*

*formulation*



*append here*

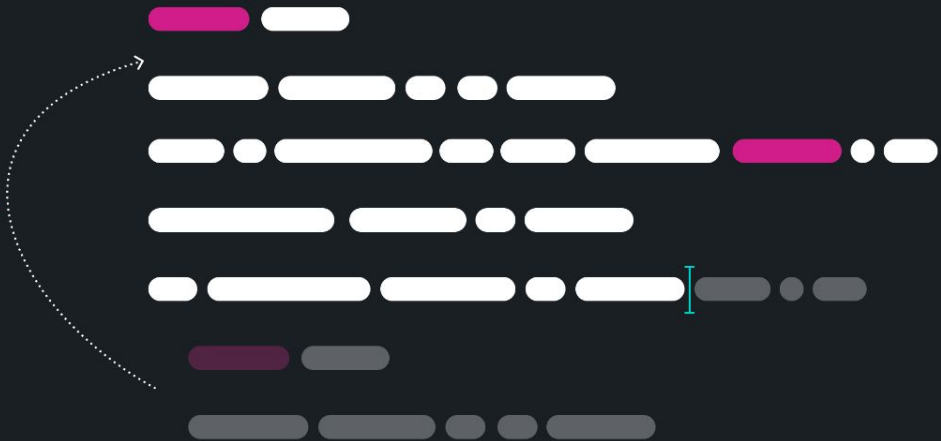


*insert here?*



*insert here?*

*hoist*





# retrieval

*create a “similarity index”*

*use that index for choosing better context*

*no fine tuning*

4 K 

8 K 

32 K 

# “traits”

**BAD:** ... some text with profanities ...

**GOOD:** ... rephrased without profanities ...

**BAD:** narrowminded text

**GOOD:** openminded text

**BAD:** toxic/imperious feedback

**GOOD:** constructive criticism

**BAD:** a perfectly good comment

**GOOD:** a perfectly good comment

**BAD:** the user input

**GOOD:**

**multi** model

**multi** roundtrip

**“Is it good?”**

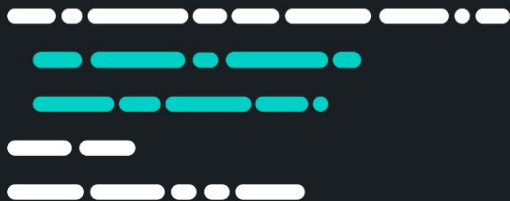
**3**

---

*Metrics & Measurement*



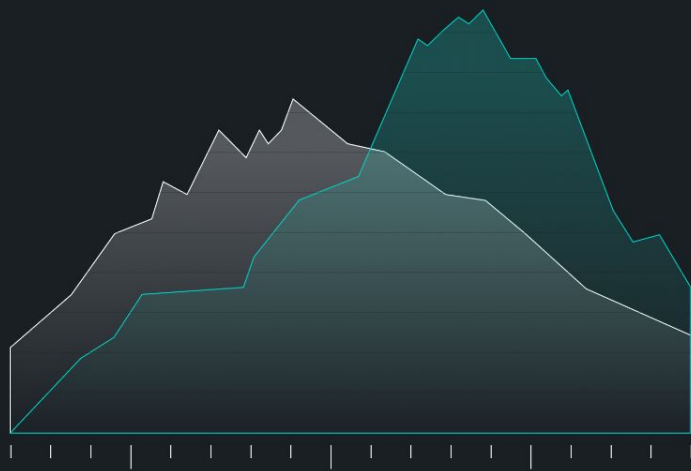
1



2



3



**more accuracy  $\neq$  more value**





YOU ARE HERE  
*promising prototype*

# Thank you!



🐦 idangazit  
@ idan@vis.social



🐦 githubnext  
🏠 githubnext.com