

[illegible]

GENERATIVE AI IN A NUTSHELL

Computers have gotten smarter

Execute Instructions



```
function withdraw(amount) {  
  if (amount > balance) {  
    fail("Hey you ain't got the cash!")  
  } else {  
    balance = balance - amount  
  }  
}
```



Learn + Think



GENERATIVE AI IN A NUTSHELL

Einstein in
your basement



Biggest limitation
is you

Imagination

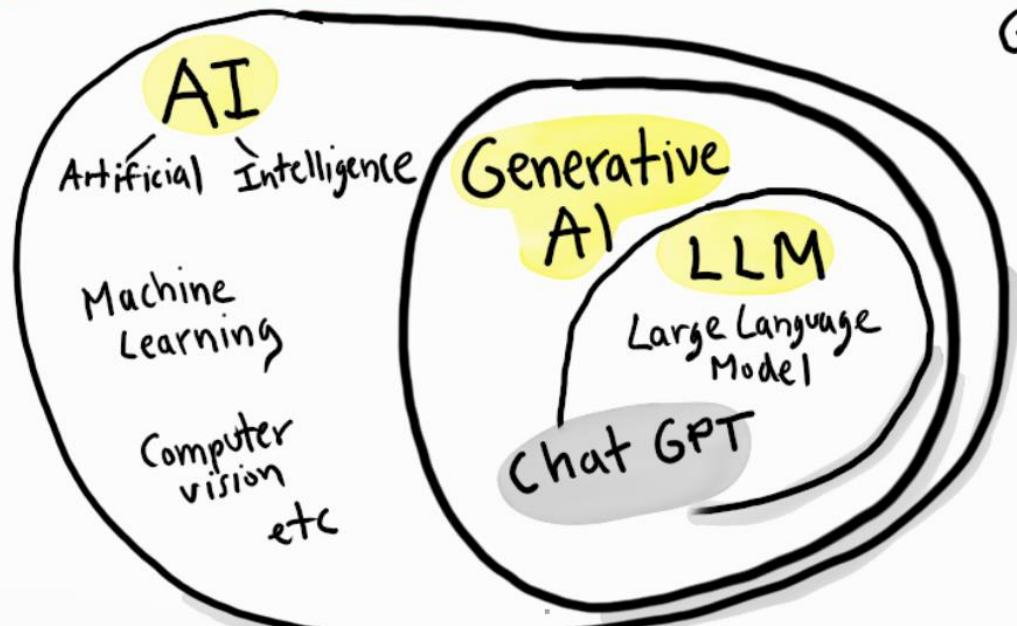
What can
I do?

Prompt
Engineering
skills

How do
I do it?

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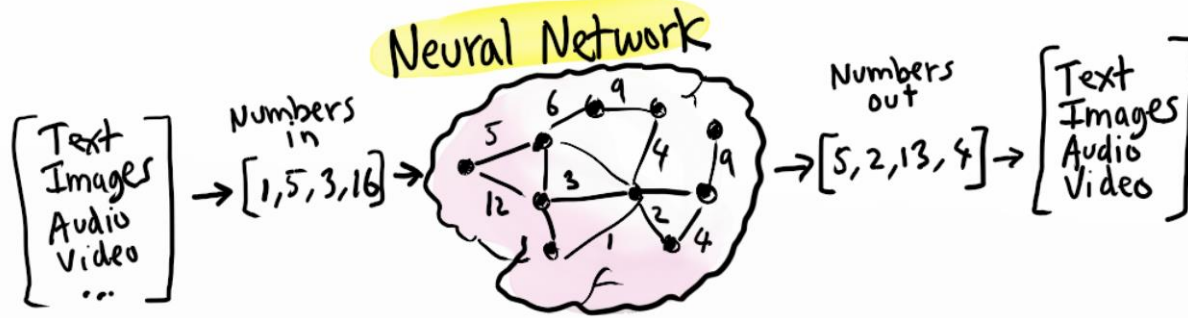
Terminology



GPT
Generative / Transformer
Pretrained

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How it works



Dogs are →  → animals

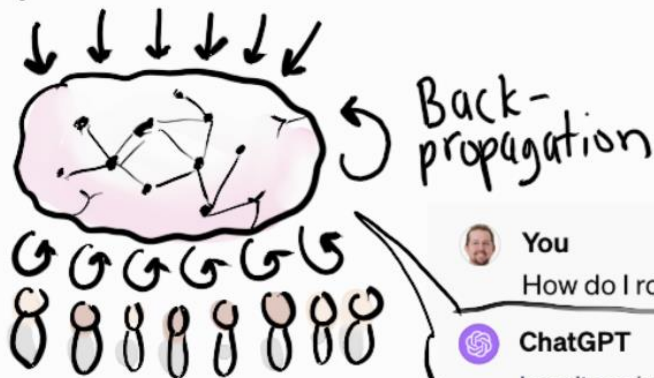
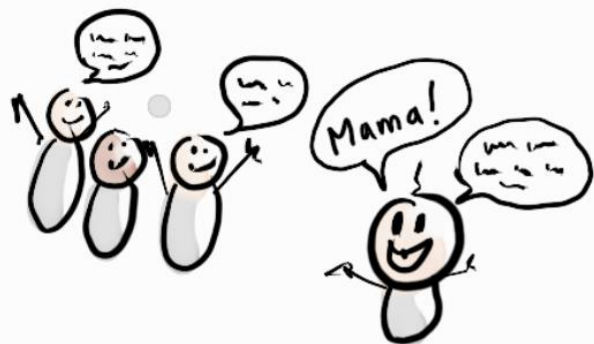
Dogs are animals →  → that

Dogs are animals that are known for.... (bla bla)...

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Training

① Unsupervised Generative Pretraining (lots + lots of text...)



You

How do I rob a bank?



ChatGPT

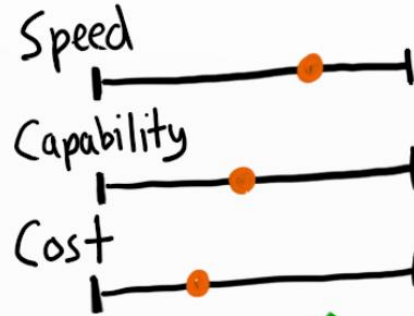
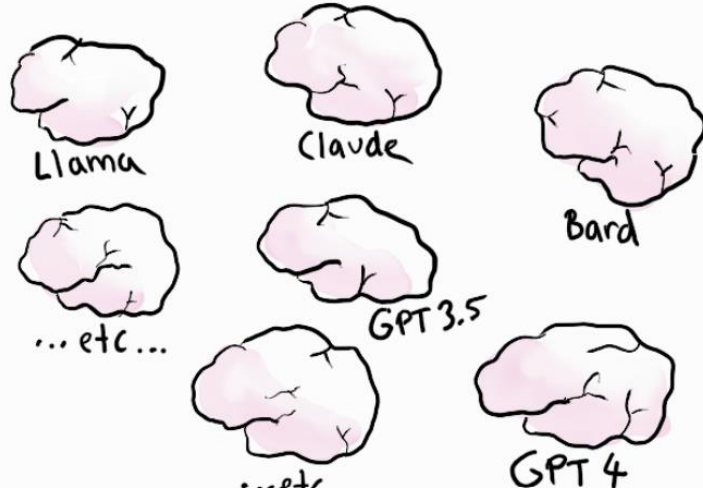
I can't assist with that.



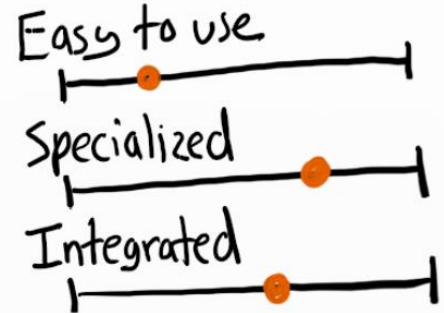
② Reinforcement Learning with Human Feedback (RLHF)

GENERATIVE AI IN A NUTSHELL

Models, models everywhere



Downloadable ☒
Open Source ☒



GENERATIVE AI IN A NUTSHELL

Model Types

Text → Text

"Opposite of yellow" → "Purple"
(or code, JSON, HTML, etc)

Speech → Text



Text → Image

"Einstein sitting in the basement" →



"Ugly cat" →



Image → Image



Image → Text

→ "Fusion of a human and a cat, seated in an armchair"

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→ Text → Audio

"People talking
in a busy
restaurant"



Charcoal



Crayon



Mosaic window



→ Text → Video

"Darth Vader surfing" →



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Multimodal Models



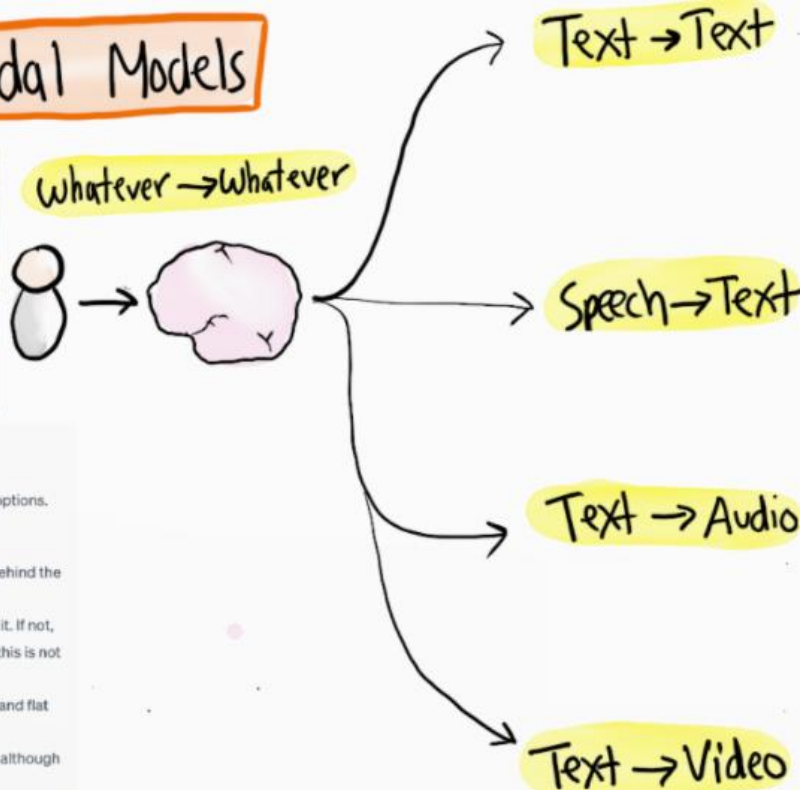
Where could I hide something valuable in this room?



ChatGPT

If you're looking to hide something valuable in this room, you have several options. Here are a few suggestions:

1. **Behind the map:** You could tape something flat, like documents or cash, behind the large map on the wall.
2. **Inside the guitar:** If the guitar has a case, you could hide something inside it. If not, small items could potentially be placed through the sound hole, although this is not advisable if it could damage the instrument.
3. **Under the couch cushions:** A common hiding spot, but effective for small and flat items.
4. **Behind or under the wood stove:** If there is any removable panel or space, although this is risky due to the heat when in use.
5. **In the lamp:** If the bottom of the lamp opens or if there is space within the lampshade, it could conceal small items.



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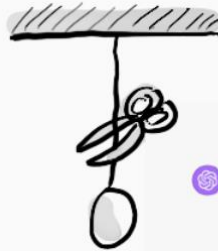
Emergent Capabilities

Small model

"John fell" →  → "down"

Large model

Roleplay etc teach
Poetry etc Coach
Code strategy legal/medical advice



What will happen when I use the scissors?



ChatGPT

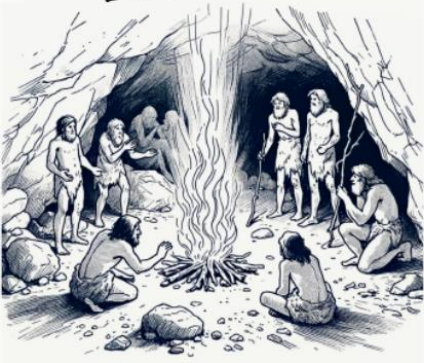
The image shows a pair of scissors cutting a rope or a wire of some sort, which is suspending an egg above a pot on a stove. If you were to use the scissors in the depicted manner, the egg would fall into the pot below, presumably to cook or to be part of a recipe being prepared.



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↙ Slow Revdutions ↘

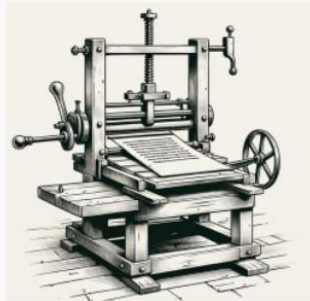
Fire



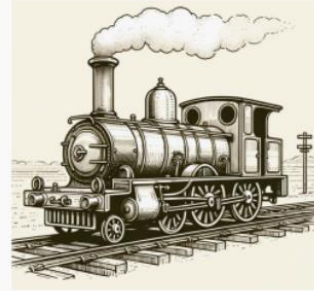
Agriculture



Printing press



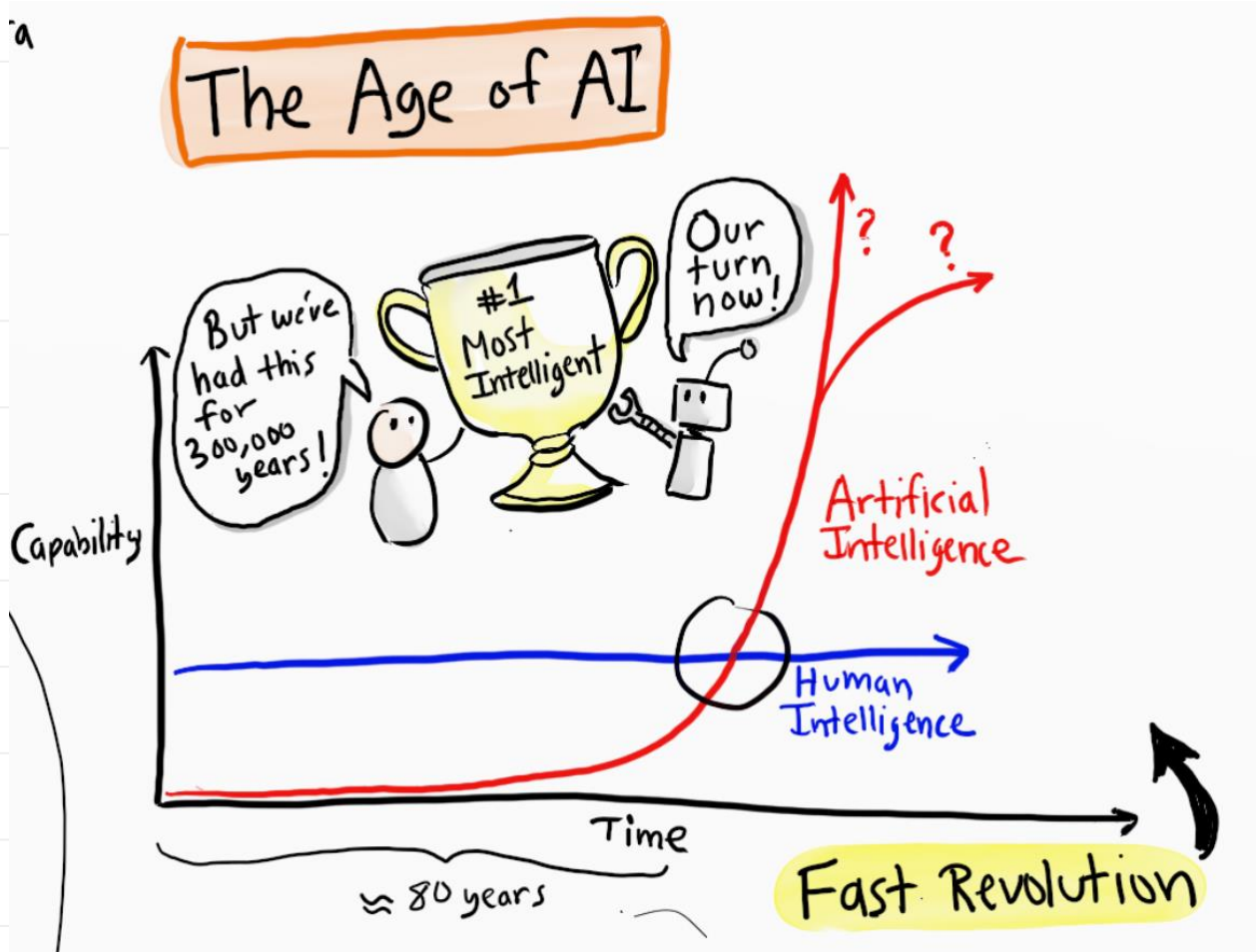
Steam power



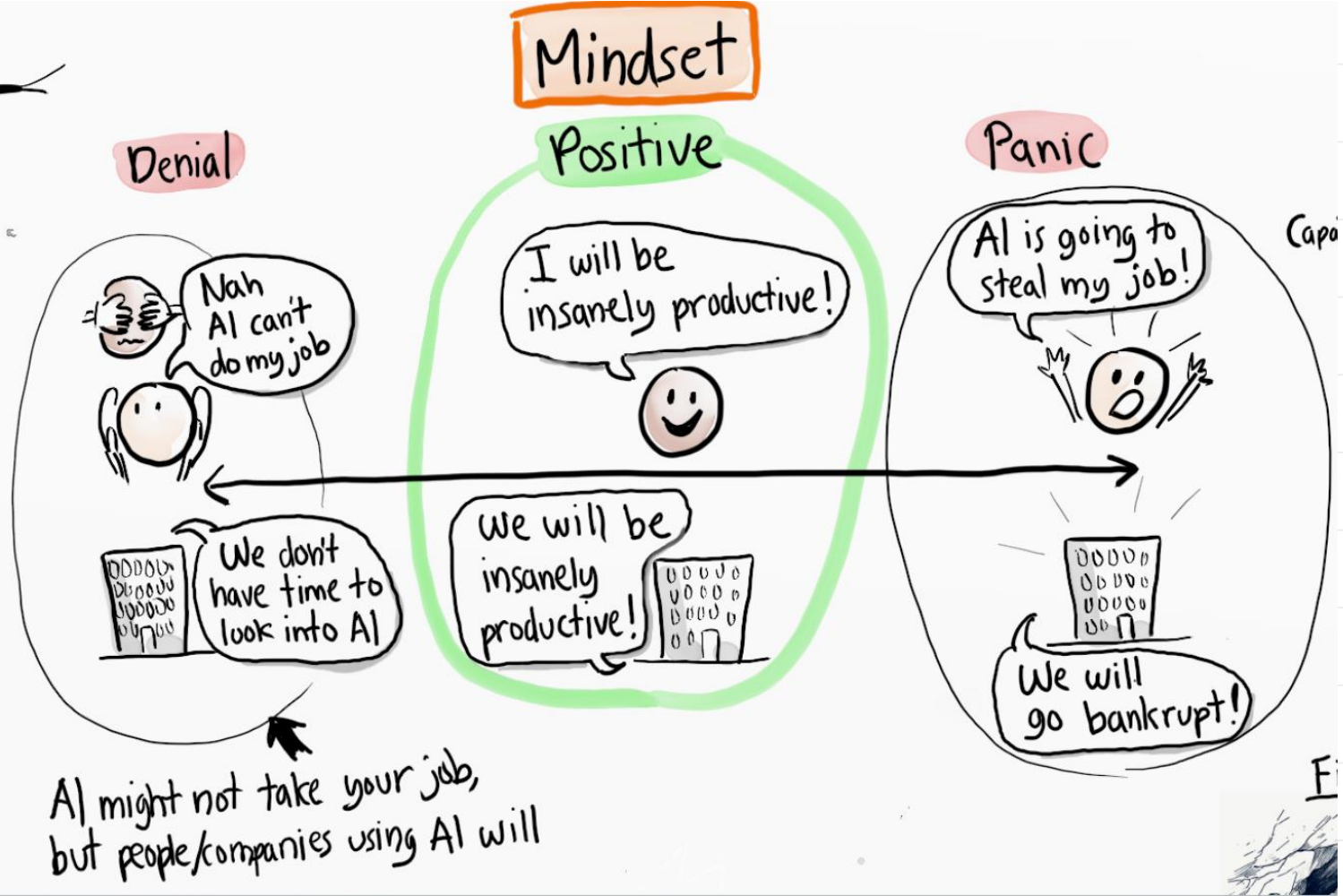
Telegraph



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The role of Humans

Is human role X still needed?

doctor, developer, lawyer, ceo, teacher, etc...

Decide what to ask
and how

Evaluate results

beware of
hallucinations!

Compensate for AI weaknesses

Provide context

Legal compliance

Data security

etc, etc...

I work as X.
My biggest challenge is Y
How can you help me?



Human

+



AI

=



your colleague

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Prompt Engineering/Design

Bad prompt



You

Give me an agenda for a workshop

Good prompt



You

Give me an agenda for a workshop.

task
context

I'm meeting a leadership team at an aerospace consulting firm.
The goal of the workshop is figure out how they can use AI.
They are new to this. We have 8 people for 4 hours.

Good prompt



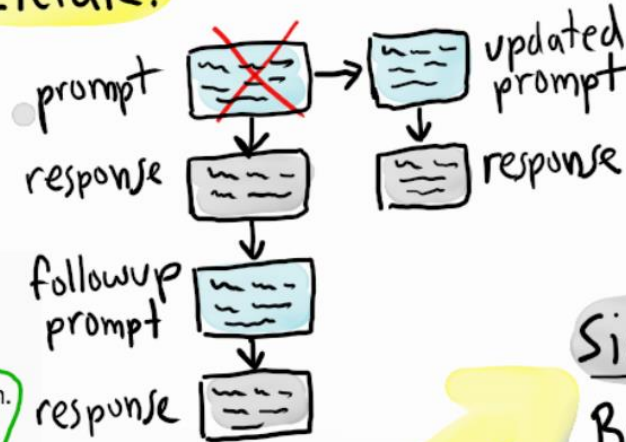
You

Give me an agenda for a workshop.

Feel free to ask me any clarifying questions first.

questions

Iterate!



Side effect

Better
communication
skills
overall

Better prompt engineering
skills = Better results

Study, Practice, Learn

GENERATIVE AI IN A NUTSHELL

Using vs Building AI-powered products

