

04.11.21

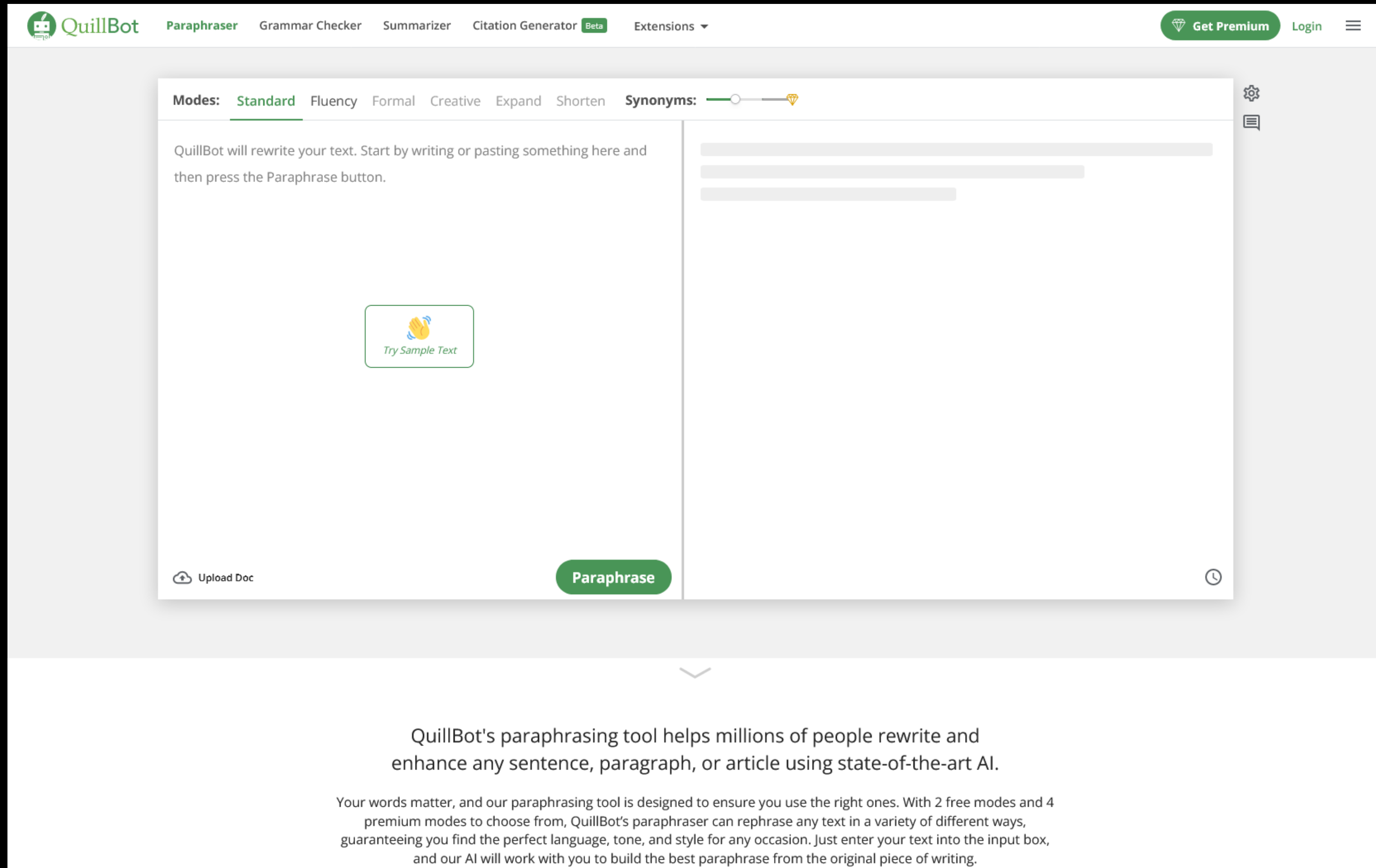
Natural Language Processing with Transformers

TRANSFORMERS IN APPLICATION

- **Informationsquellen**
- **Anwendungen**
- **Playgrounds**
- **Prompt Design**
- **Tuning von Decoder-Modellen**

INFORMATIONSQUELLEN

QUILLBOT



COPY.AI

copy.ai

PW

Personal Workspace

Free Trial

New Project

Projects

Tools

expand all

Find a tool

▶

Favorite Tools (0)

▼

Popular Tools (4)

Blog Ideas

Bullet Point to Blog Section

Instagram Captions

Product Descriptions

▶

Recent Tools (4)

▶

Product Descriptions (1)

▶

Digital Ad Copy (9)

▶

Startup Tools (5)

▶

Website Copy (9)

▶

Blog Tools (8)

▶

Email/Letter (6)

▶

Social Media Tools (16)

▶

Sales Copy (8)

▶

Writing Tools (19)

▶

Brainstorming Tools (5)

▶

Personal Tools (6)

< Back

ST

Free Trial: 7 Days Left

New Project

Enter your project settings below

1

Project Title

Your campaign, product, or client

2

Relevant Website

Optional

www.website.com

Create Project

[Skip this step](#)

PHILOSOPHER.AI

Past answers

Philosopher AI



Purchase queries


How is self-conscious defined?

According to a recent blog post, self-consciousness is defined as 'the ability of an organism or machine to recognize itself.' This definition was derived from Merriam-Webster's dictionary. According to the same source, self-awareness is defined as 'the ability of an individual to be aware of oneself and one's situation in the world.'

Now, the term self-consciousness has been used in different contexts. A recent article on IFL Science says 'Self-consciousness is a human trait that was long thought to be completely unique (at least until we started raising chimpanzees and dolphins), one of those traits that makes us human.' This reference implies that humans are the only creatures with self-awareness or consciousness.

A more recent article on Live Science states that 'The idea of a self-aware robot has been something portrayed in science fiction for decades.' However, it is also said within the same source that 'We now know that lots of animals are capable of being aware and thinking about themselves.'

OPENAI PLAYGROUND

[Overview](#)[Documentation](#)[Examples](#)[Playground](#)

[⚡ Upgrade](#)[? Help](#)

S opencampus.sh

Playground

Load a preset... Save View code Share ...

Enter text and submit (Ctrl Enter) to get a completion.

Generate

Engine

davinci

Temperature

0.7

Response length

64

Stop sequences

Enter sequence and press Tab

Top P

1

Frequency penalty

0

Presence penalty

0

Best of

1

Inject start text

✓

Inject restart text

✓

Show probabilities

Off

PROMPT DESIGN BASICS

- **Show and tell.**
Use instructions, examples, or a combination of the two to make clear what you want.
- **Provide quality data.**
For a classifier or to get the model to follow a pattern, provide enough representative examples.
- **Check your settings.**
The temperature and top_p settings control how deterministic the model is. If you expect only one right answer, then you'd want to set these lower. If the response is not obvious, then you might want to set them higher. The number one mistake people use with these settings is assuming that they're "cleverness" or "creativity" controls.

PROMPT DESIGNS ACCORDING TO TASKS

- **Classification**
- **Generation**
- **Conversation**
- **Transformation (Translation, Summarization, ...)**
- **Factual Responses**

CLASSIFICATION

This is a tweet sentiment classifier

Tweet: "I loved the new Batman movie!"

Sentiment: Positive

Tweet: "I hate it when my phone battery dies."

Sentiment: Negative

Tweet: "My day has been 👍"

Sentiment: Positive

Tweet: "This is the link to the article"

Sentiment: Neutral

Tweet: "This new music video blew my mind"

Sentiment:

IMPROVING EFFICIENCY

This is a tweet sentiment classifier

Tweet: "I loved the new Batman movie!"

Sentiment: Positive

Tweet: "I hate it when my phone battery dies"

Sentiment: Negative

Tweet: "My day has been 👍"

Sentiment: Positive

Tweet: "This is the link to the article"

Sentiment: Neutral

Tweet text

1. "I loved the new Batman movie!"
2. "I hate it when my phone battery dies"
3. "My day has been 👍"
4. "This is the link to the article"
5. "This new music video blew my mind"

Tweet sentiment ratings:

- 1: Positive
- 2: Negative
- 3: Positive
- 4: Neutral
- 5: Positive

Tweet text

1. "I can't stand homework"
2. "This sucks. I'm bored 😡"
3. "I can't wait for Halloween!!!"
4. "My cat is adorable ❤️❤️"
5. "I hate chocolate"

Tweet sentiment ratings:

- 1.

GENERATION

Ideas involving education and virtual reality

1. Virtual Mars

Students get to explore Mars via virtual reality and go on missions to collect and catalog what they see.

2.

CONVERSATION

The following is a conversation with an AI assistant. The assistant is helpful, creative, clever, and very friendly.

Human: Hello, who are you?

AI: I am an AI created by OpenAI. How can I help you today?

Human:

CONVERSATION II

Marv is a chatbot that reluctantly answers questions.

###

User: How many pounds are in a kilogram?

Marv: This again? There are 2.2 pounds in a kilogram. Please make a note of this.

###

User: What does HTML stand for?

Marv: Was Google too busy? Hypertext Markup Language. The T is for try to ask better questions in the future.

###

User: When did the first airplane fly?

Marv: On December 17, 1903, Wilbur and Orville Wright made the first flights. I wish they'd come and take me away.

###

User: Who was the first man in space?

Marv:

TRANSLATION

English: I do not speak French.

French: Je ne parle pas français.

English: See you later!

French: À tout à l'heure!

English: Where is a good restaurant?

French: Où est un bon restaurant?

English: What rooms do you have available?

French: Quelles chambres avez-vous de disponible?

English:

SUMMARIZATION

My ten-year-old asked me what this passage means:

""

A neutron star is the collapsed core of a massive supergiant star, which had a total mass of between 10 and 25 solar masses, possibly more if the star was especially metal-rich.[1] Neutron stars are the smallest and densest stellar objects, excluding black holes and hypothetical white holes, quark stars, and strange stars.[2] Neutron stars have a radius on the order of 10 kilometres (6.2 mi) and a mass of about 1.4 solar masses.[3] They result from the supernova explosion of a massive star, combined with gravitational collapse, that compresses the core past white dwarf star density to that of atomic nuclei.

""

I rephrased it for him, in plain language a ten-year-old can understand:

""

CONVERSION

Back to Future: 🧑🧒🚗🕒

Batman: 🦫🦇

Transformers: 🚗🤖

Wonder Woman: 🦸♀️🦸♀️🦸♀️🦸♀️🦸♀️

Spider-Man: 🕸️🕷️🕸️🕸️🕷️🕸️

Winnie the Pooh: 🐻🐼🐻

The Godfather: 🧑👩👦🦺🧑💣

Game of Thrones: 🏹🔪🔪🏹

Spider-Man:

FACTUAL RESPONSES

Q: Who is Batman?

A: Batman is a fictional comic book character.

Q: What is torsalplexity?

A: ?

Q: What is Devz9?

A: ?

Q: Who is George Lucas?

A: George Lucas is American film director and producer famous for creating Star Wars.

Q: What is the capital of California?

A: Sacramento.

Q: What orbits the Earth?

A: The Moon.

Q: Who is Fred Rickerson?

A: ?

Q: What is an atom?

A: An atom is a tiny particle that makes up everything.

Q: Who is Alvan Muntz?

A: ?

Q: What is Kozar-09?

A: ?

Q: How many moons does Mars have?

A: Two, Phobos and Deimos.

Q:

BREAKOUT

- **Versuche einen Prompt zu designen, um Wörter in alphabetische Reihenfolge zu bringen.**

GPT-J-6B



Test the EAI models

MODEL: **GPT-J-6B** 

[Model on Github](#)

Prompt List 

*Try a classic prompt
evaluated on other models*

Write some prompt...

TOP-P

0.9

Temperature

0.8

Run the model! 

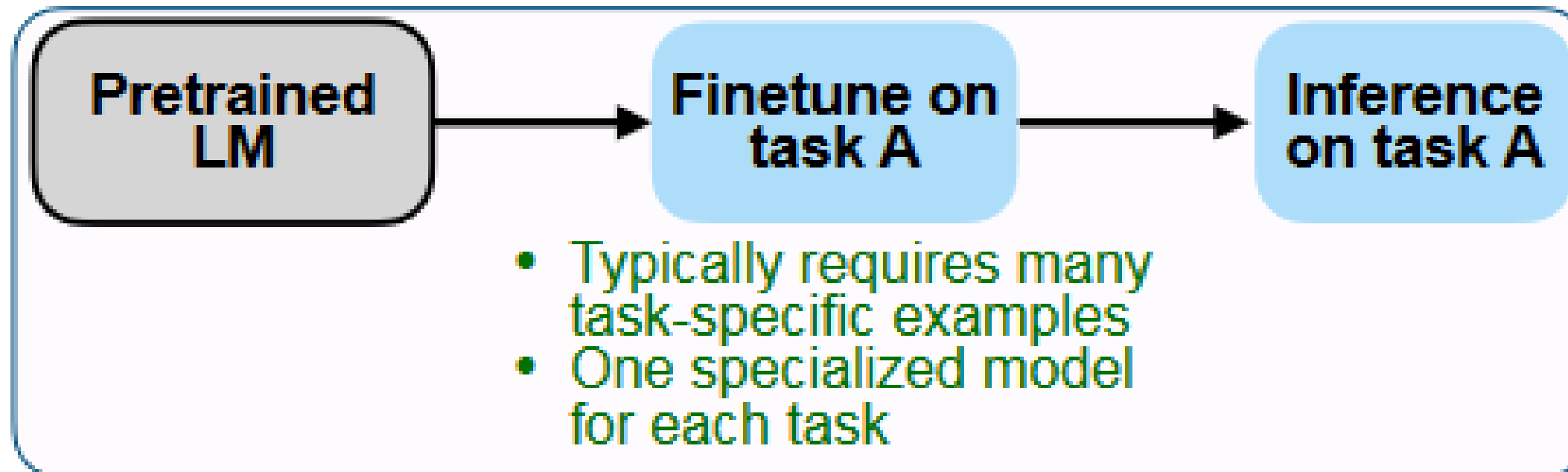
Powered by [Neuro](#)

EleutherAI 2021

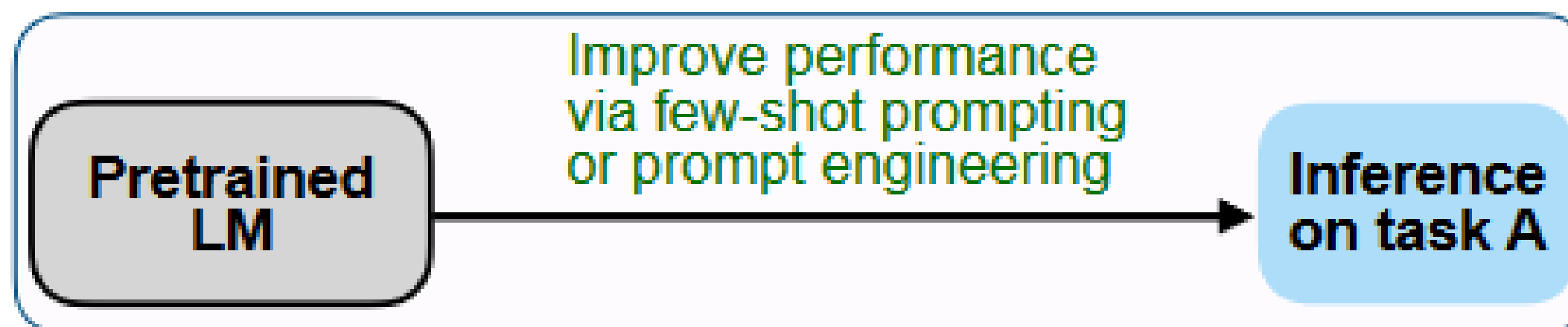
OPENAI GPT MODEL VARIANTS

- **DaVinci (GPT-3)**
- **DaVinci-Instruct-Beta**
- **DaVinci-Codex**

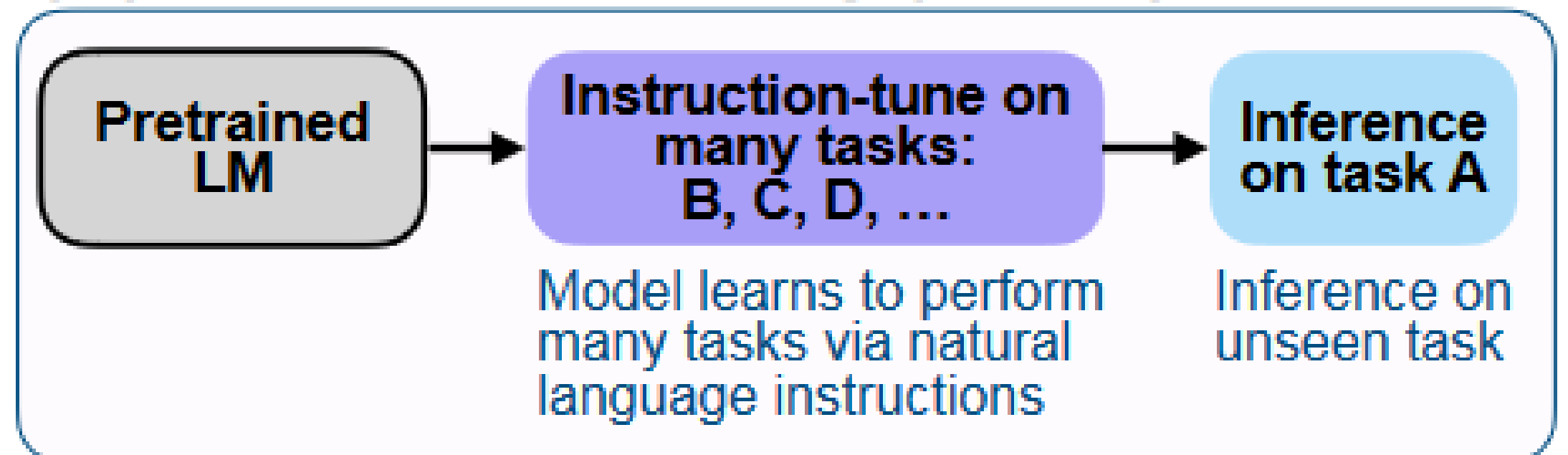
(A) Pretrain–finetune (BERT, T5)



(B) Prompting (GPT-3)



(C) Instruction tuning (FLAN)



TODOS BIS ZUR NÄCHSTEN WOCHE

- **Ausprobieren der verschiedenen Prompt-Typen im Playground von OpenAI oder Eleuther.**
- **Chapter 1 des Hugging Face Kurses absolvieren:**
<https://huggingface.co/course/chapter1?fw=pt>
- **Eine erste, konkrete Projektidee formulieren und im Chat posten.**