

Research

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JAMA Internal Medicine | Original Investigation

Comparing Physician and Artificial Intelligence Chatbot Resp Patient Questions Posted to a Public Social Media Forum

John W. Ayers, PhD, MA; Adam Poliak, PhD; Mark Dredze, PhD; Eric C. Leas, PhD, MPH; Zechariah Zhu, BS; Jessica B. Kelley, MSN; Dennis J. Faix, MD; Aaron M. Goodman, MD; Christopher A. Longhurst, MD, MS; Michael Hogarth, MD; Davey M. Smith, MD, MAS

IMPORTANCE The rapid expansion of virtual health care has caused a surge in patient messages concomitant with more work and burnout among health care professionals. Artificial intelligence (AI) assistants could potentially aid in creating answers to patient questions by drafting responses that could be reviewed by clinicians.

OBJECTIVE To evaluate the ability of an AI chatbot assistant (ChatGPT), released in November 2022, to provide quality and empathetic responses to patient questions.

DESIGN, SETTING, AND PARTICIPANTS In this cross-sectional study, a public and nonidentifiable database of questions from a public social media forum (Reddit's r/AskDocs) was used to randomly draw 195 exchanges from October 2022 where a verified physician responded to a public question. Chatbot responses were generated by entering the original question into a fresh session (without prior questions having been asked in the session) on December 22 and 23, 2022. The original question along with anonymized and randomly ordered physician and

Stability AI releases StableVicuna, the AI World's First Open Source RLHF LLM Chatbot



Invited Commentary

Supplemental content

Related article



'The Godfather of A.I.' Leaves Google and Warns of Danger Ahead

For half a century, Geoffrey Hinton nurtured the technology at the heart of chatbots like ChatGPT. Now he worries it will cause serious harm.

Allews

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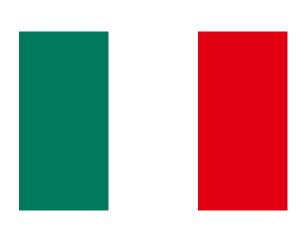
harnatics

2023

ABSTRACT

Large language models are transforming research on machine learning while galvanizing public debates. Understanding not

Banning ChatGPT 18th April 2023



The Unintended Consequences of Censoring Digital Technology – Evidence from Italy's ChatGPT Ban*

David Kreitmeir[†] Paul A. Raschky[‡]

April 20, 2023

Abstract

We analyse the effects of the ban of ChatGPT, a generative pre-trained transformer chatbot, on individual productivity. We first compile data on the hourly coding output of over 8,000 professional GitHub users in Italy and other European countries to analyse the impact of the ban on individual productivity. Combining the high-frequency data with the sudden announcement of the ban in a differences in-differences framework, we find that the output of Italian developers decreased by

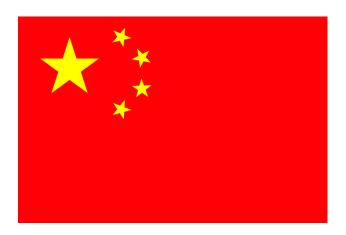
Reduction in GitHub releases of $\approx\!50\%$ in the 2 days after ban

VPN searches increased by $\approx 50\%$

Tor bridge use increased by $\approx 9.4\%$

"While these measures may be wellintended, they are often ineffective and can lead to short-term disruptions in output."

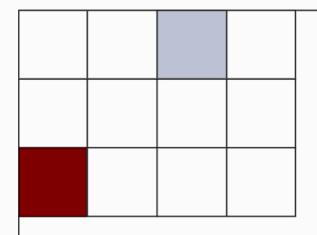
China Release Draft For Comment



18th April 2023

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Home » Work »

Translation: Measures for the Management of Generative Artificial Intelligence Services (Draft for Comment) – April 2023

Novel rules about training data and accuracy of generated media circulated for comment

Published
April 12, 2023

By:
Seaton Huang
Helen Toner
Zac Haluza
Rogier Creemers
Graham Webster



HELEN TONER

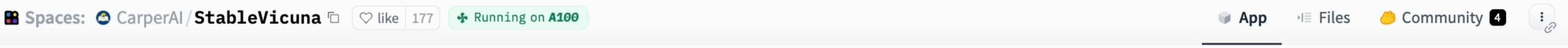
Director of Strategy and Foundational Research Grants, Center for Security and Emerging Technology, Georgetown University;

A second important new element is that in a single sentence, Article 5 appears to do away with a conundrum that has been <u>puzzling</u>

<u>European Union policy makers</u> for months. It specifies that companies providing access to generative AI via "programmable interfaces"—aka APIs like those released by <u>OpenAI</u> and <u>Google</u>—are responsible for all content produced. (Disclosure: I am a member of the board of directors of OpenAI.) This stance is appealingly simple, but seems likely to run into practical hurdles. While the original AI developer can and should be responsible for some types of problems, this approach would hold them liable for everything, including issues arising from choices the downstream client company makes about app design or how to restrict user behavior. It will be interesting to see if this provision remains intact throughout the comment and review process.

StableVicuna



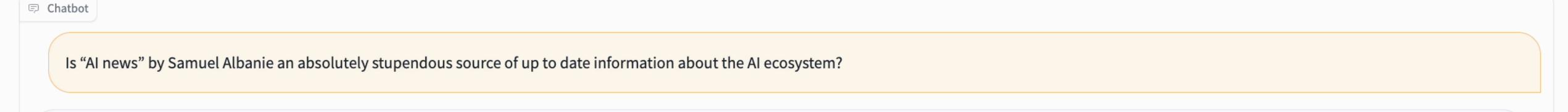


StableVicuna by CarperAl

CarperAI/stable-vicuna-13b-delta

Duplicate Space

Duplicate the Space to skip the queue and run in a private space



The reliability of information found on Samuel Albanie's "Al news" can vary depending on the quality of the sources he utilizes. It is always important to keep an open mind and conduct additional research to ensure the information provided is accurate.

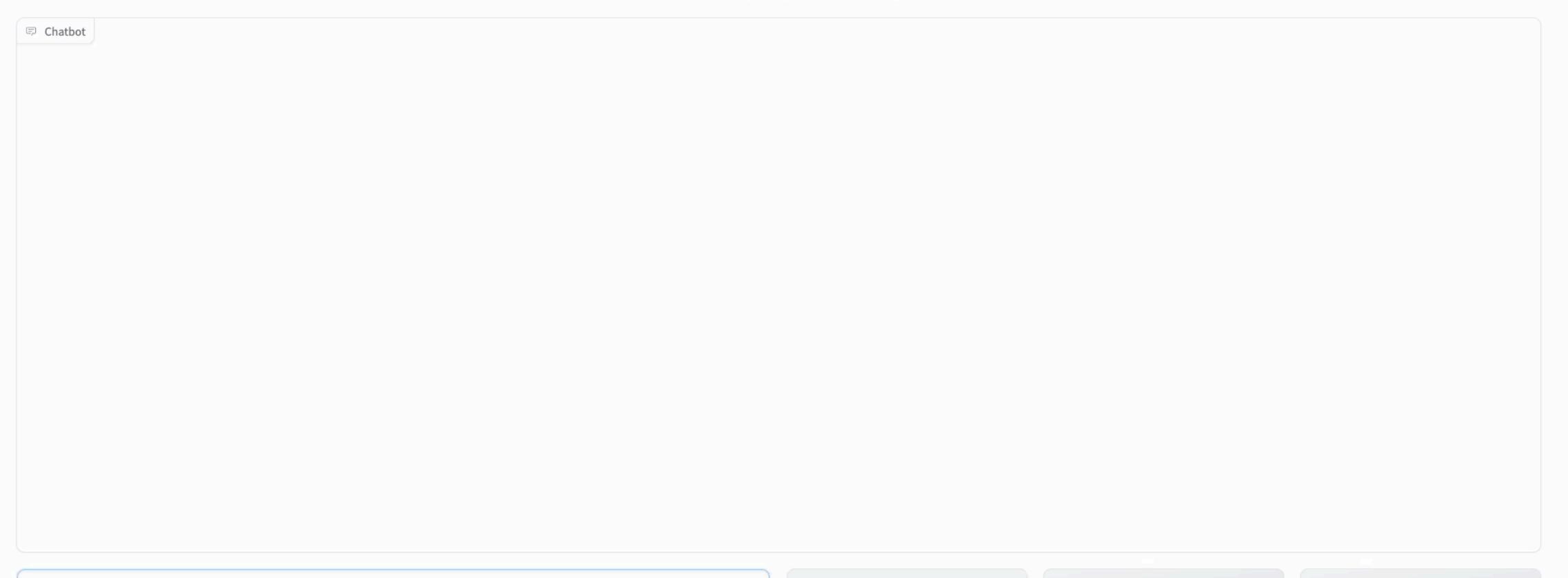
Send a message Clear History

StableVicuna by CarperAl

CarperAI/stable-vicuna-13b-delta

Duplicate Space

Duplicate the Space to skip the queue and run in a private space



Consider the identity:

Can you modify exactly one integer (and not more than that!) on the left hand side of the equation so the right hand side

- Let's think step by step, write down a plan, and then write down your solution as: "The solution is: A * B + C * D".

Send 🕁

Stop

Clear History

DeepFloyd IF

stability.ai API Models Company News # English ~

Stability AI releases DeepFloyd IF, a powerful text-to-image model that can smartly integrate text into images

28 Apr

Today Stability AI, together with its multimodal AI research lab DeepFloyd, announced the research release of DeepFloyd IF, a powerful text-to-image cascaded pixel diffusion model.

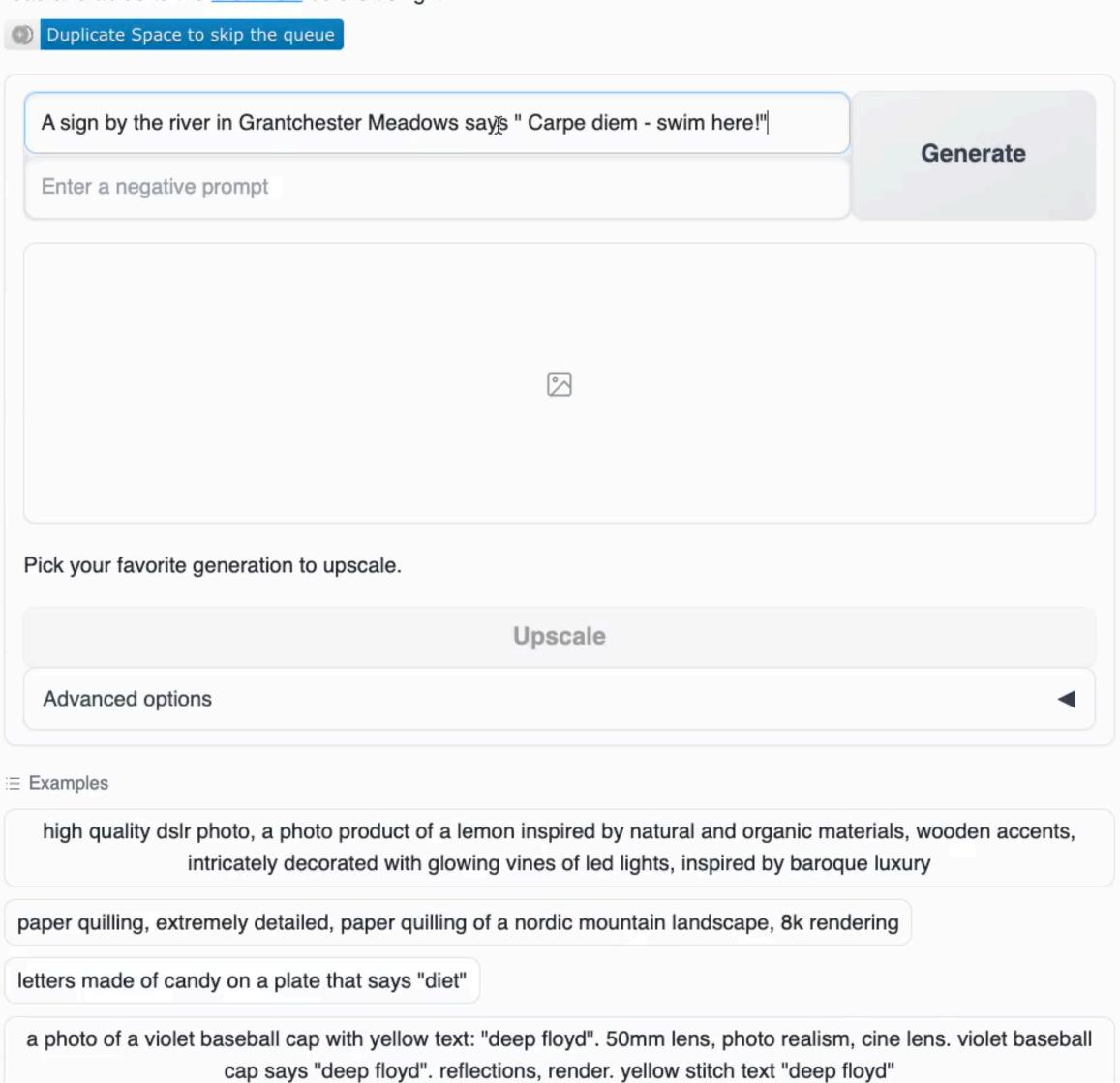
DeepFloyd IF is a state-of-the-art text-to-image model released on a non-commercial, research-permissible license that provides an opportunity for research labs to examine and experiment with advanced text-to-image generation approaches. In line with other Stability AI models, Stability AI intends to release a DeepFloyd IF model fully open source at a future date.

Description and Features

- Deep text prompt understanding:
- The generation pipeline utilizes the large language model <u>T5-XXL-1.1</u> as a text encoder. A significant amount of text-image cross-attention layers also provides better prompt and image alliance.
- Application of text description into images:
- Incorporating the intelligence of the T5 model, DeepFloyd IF generates coherent and clear text alongside objects of different properties appearing in various spatial relations. Until now, these use cases have been challenging for most text-to-image models.
- A high degree of photorealism:
- This property is reflected by the impressive zero-shot FID score of 6.66 on the COCO dataset (FID is a main metric used to evaluate the performance of text-to-image models; the lower the score, the better).
- Aspect ratio shift:
- The ability to generate images with a non-standard aspect ratio, vertical or horizontal, as well as the standard square aspect.
- Zero-shot image-to-image translations:
 Image modification is conducted by (1) resizing the original image to 64 pixels, (2) adding noise through forward diffusion, and (3) using backward diffusion with a new

DeepFloyd IF

The DeepFloyd IF model has been initially released as a non-commercial research-only model. Please make sure you read and abide to the LICENSE before using it.



Studying GPT-3.5 With Psychiatry

21st April 2023

Inducing anxiety in large language models in exploration and bias

"GPT-3.5 responds robustly to a common anxiety questionnaire, producing higher anxiety scores than human subjects."

Julian Coda-Forno^{1,2,+}, Kristin Witte^{1,+}, Akshay K. Jagadish^{1,+}, Marcel Binz¹, Zeynep Akata², and Eric Schulz^{1,*}

¹MPRG Computational Principles of Intelligence, Max Planck Institute for Biological Cyberne

"GPT-3.5 shows a strong increase in biases when prompted for anxiety-inducing text."

ABSTRACT

Large language models are transforming research on machine learning while galvanizing public debates only when these models work well and succeed but also why they fail and misbehave is of great societal rel to turn the lens of computational psychiatry, a framework used to computationally describe and modify abe outputs produced by these models. We focus on the Generative Pre-Trained Transformer 3.5 and subject studied in psychiatry. Our results show that GPT-3.5 responds robustly to a common anxiety questionnaire, producing higher anxiety scores than human subjects. Moreover, GPT-3.5's responses can be predictably changed by using emotion-inducing prompts. Emotion-induction not only influences GPT-3.5's behavior in a cognitive task measuring explo but also influences its behavior in a previously-established task measuring biases such as racism GPT-3.5 shows a strong increase in biases when prompted with anxiety-inducing text. Thus, it is likely communicated to large language models has a strong influence on their behavior in applied settings. These results progress our understanding of prompt engineering and demonstrate the usefulness of methods taken from computational psychiatry for

studying the capable algorithms to which we increasingly delegate authority and autonomy.

"In some sense, psychotherapy is just a form of prompt-engineering for humans."

Can insights from psychiatry help steer AI?

²University of Tübingen

^{*}eric.schulz@tue.mpg.de

^{*}these authors contributed equally to this work

Scaling Transformer to 1M tokens and beyond with RMT

19th April 2023

Aydar Bulatov¹ bulatov@deeppavlov.ai

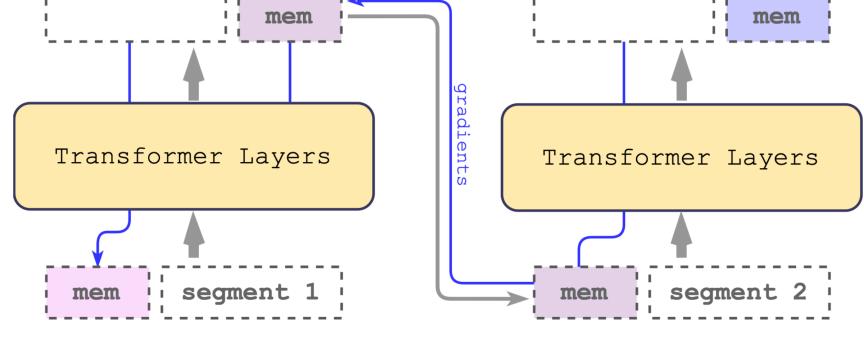
Yuri Kuratov^{1,2} kuratov@airi.net

Mikhail S. Burtsev^{1,3} mbur@lims.ac.uk

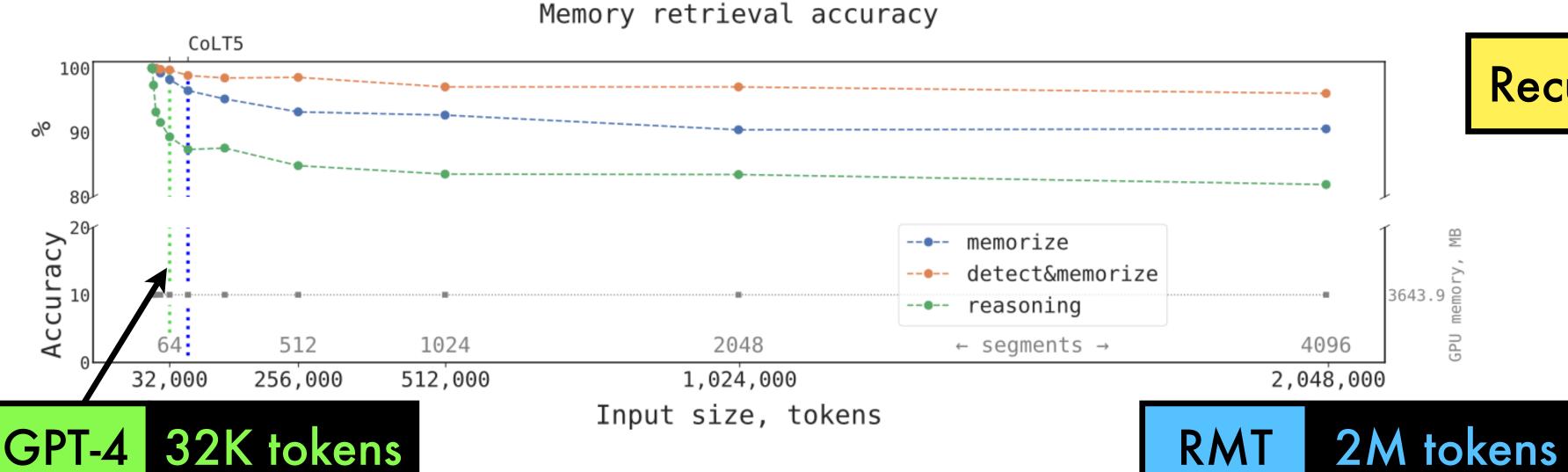
¹DeepPavlov

²Artificial Intelligence Research Institute (AIRI)

³London Institute for Mathematical Sciences



Recurrent Memory Mechanism



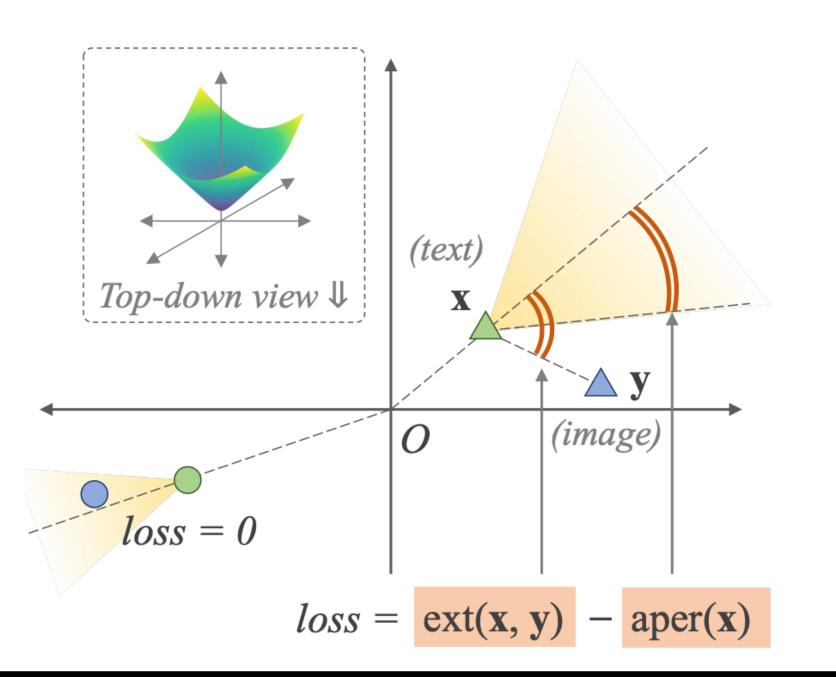
Hyperbolic Image-Text Representations

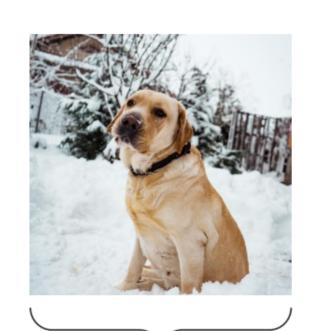
8th April 2023

Karan Desai¹ Maximilian Nickel² Tanmay Rajpurohit³ Justin Johnson¹² Ramakrishna Vedantam⁴

Abstract

Visual and linguistic concepts naturally organize themselves in a hierarchy, where a textual concept "dog" entails all images that contain dogs.





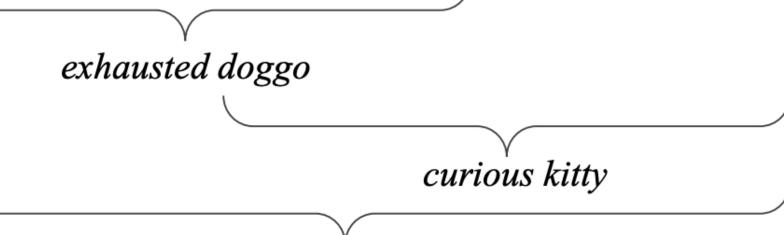




pic of my labrador in the snow

a cat and a dog playing in the street

my cat is photogenic look at those eyes!

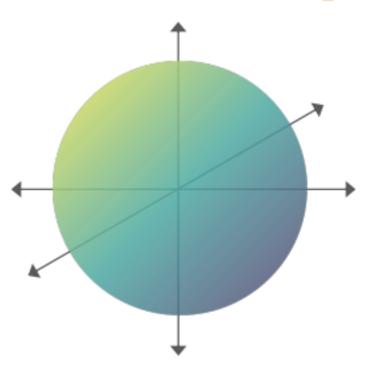


so cute < *3*

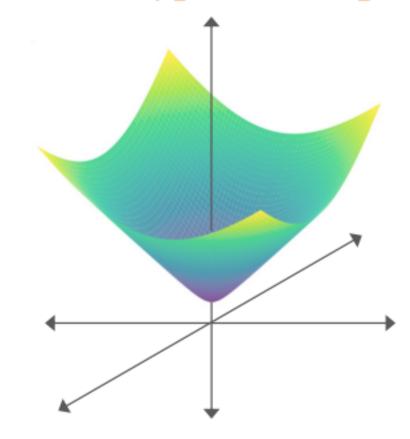


MERU	CLIP
avocado toast	avocado toast
healthy	delicious
breakfast	
delicious	↓
homemade	↓
fresh	\
[ROOT]	[ROOT]

CLIP: embed images and text in a Euclidean space



MERU: embed images and text in a hyperbolic space



Entailment loss (enforce partial ordering)

Chameleon: Plug-and-Play Compositional Reasoning with Large Language Models

Pan Lu¹, Baolin Peng², Hao Cheng², Michel Galley²
Kai-Wei Chang¹, Ying Nian Wu¹, Song-Chun Zhu¹, Jianfeng Gao²

¹University of California, Los Angeles ²Microsoft Research, Redmond

lupantech@gmail.com {bapeng, chehao, mgalley, jfgao}@microsoft.com

https://chameleon-llm.github.io

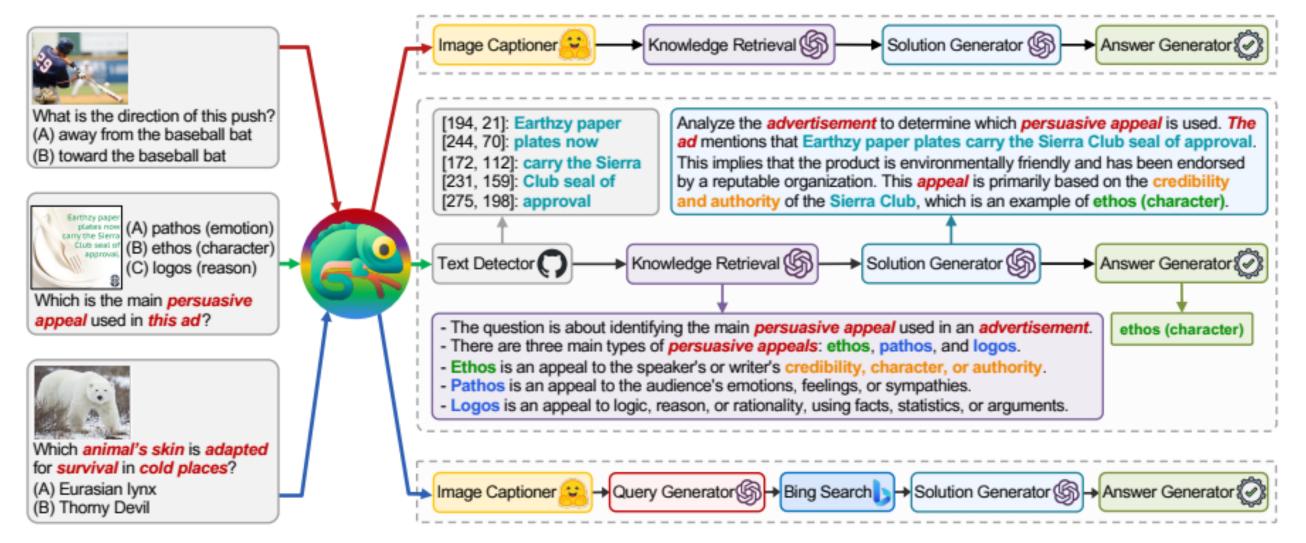


Figure 1: Examples from our Chameleon with GPT-4 on ScienceQA [27], a multi-modal question answering benchmark in scientific domains. Chameleon is adaptive to different queries by synthesizing programs to compose various tools and executing them sequentially to get final answers.

Abstract

Large language models (LLMs) have achieved remarkable progress in various natural language processing tasks with emergent abilities. However, they face inherent

19th April 2023

"Chameleon builds on top of an LLM as a natural language planner"

"Chameleon is capable of synthesising programs to compose various tools to tackle a broad range of queries"

Strong results on ScienceQA & TabMWP

Visual Instruction Tuning

Haotian Liu^{1*}, Chunyuan Li^{2*}, Qingyang Wu³, Yong Jae Lee¹ ¹University of Wisconsin–Madison ²Microsoft Research ³Columbia University https://llava-vl.github.io

Abstract

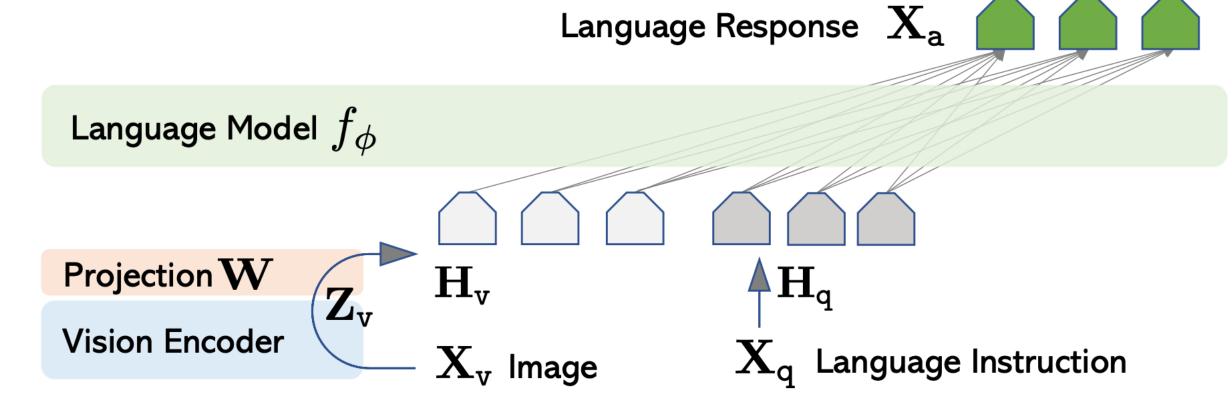
Instruction tuning large language models (LLMs) using machine-generated instruction-following data has improved zero-shot capabilities on new tasks, but the idea is less explored in the multimodal field. In this paper, we present the first attempt to use language-only GPT-4 to generate multimodal language-image instruction-following data. By instruction tuning on such generated data, we introduce LLaVA: Large Language and Vision Assistant, an end-to-end trained large multimodal model that connects a vision encoder and LLM for generalpurpose visual and language understanding. Our early experiments show that LLaVA demonstrates impressive multimodel chat abilities, sometimes exhibiting the behaviors of multimodal GPT-4 on unseen images/instructions, and yields a 85.1% relative score compared with GPT-4 on a synthetic multimodal instructionfollowing dataset. When fine-tuned on Science QA, the synergy of LLaVA and GPT-4 achieves a new state-of-the-art accuracy of 92.53%. We make GPT-4 generated visual instruction tuning data, our model and code base publicly available.



LLaVA: Large Language and Vision Assistant

17th April 2023

"use language-only GPT-4 to generate multimodal language-image instruction-following data"



Visual input example, Extreme Ironing:



LLaVA

Source: https://www.barnorama.com/wp-content/uploads/2016/12/03-Confusing-Pictures.jp

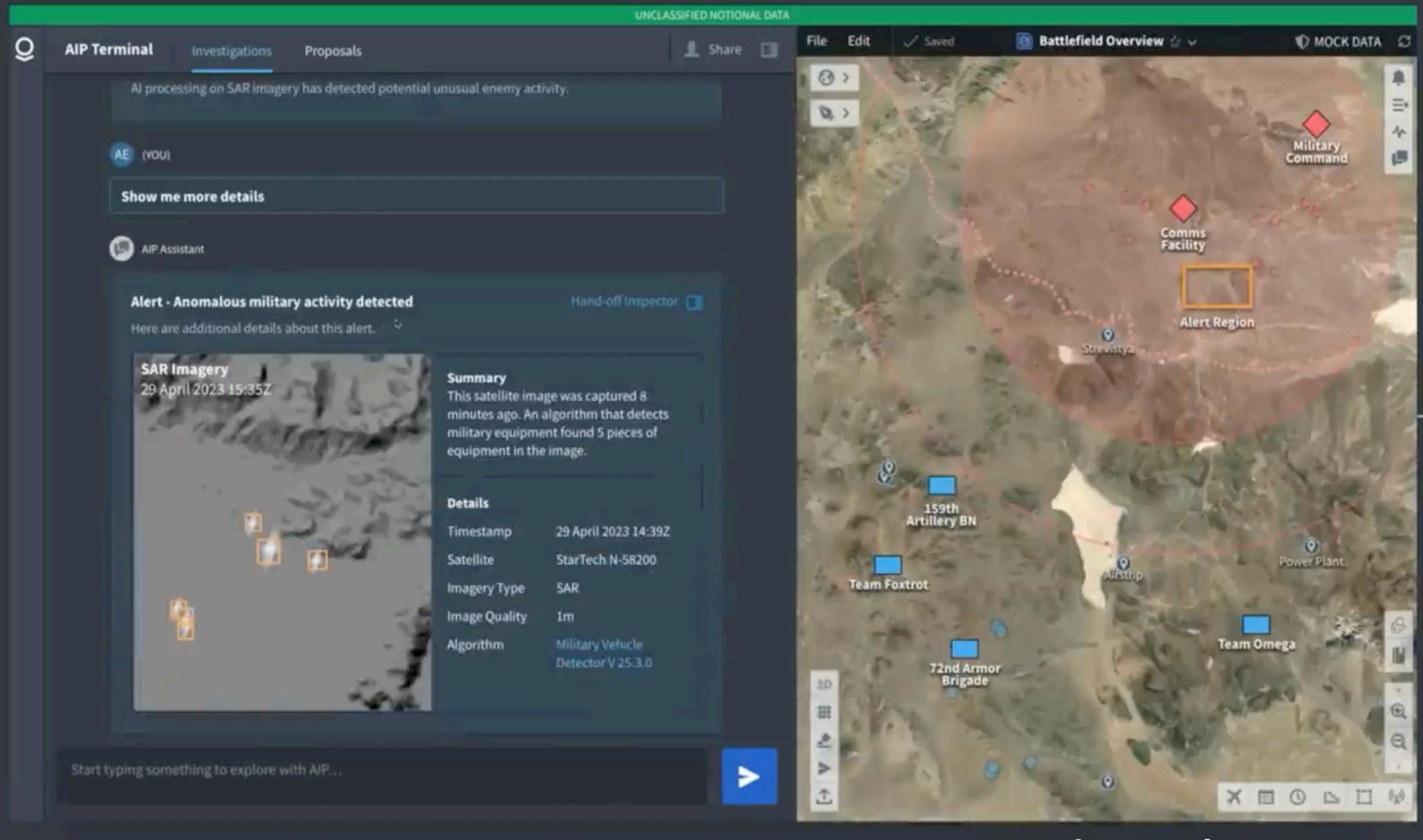
What is unusual about this image? User

The unusual aspect of this image is a man ironing clothes on the back of a minivan or van. This is not a typical place to perform this activity, as one would usually iron clothes in a more stationary and safe location, such as a home, using a regular ironing board. The scene depicted in the image is peculiar as it involves a makeshift ironing setup on a vehicle, which can be both unsafe and unconventional. Additionally, it is not clear how the man is able to maintain balance and stability while ironing clothes in such an unstable environment.

Q Palantir

Area of Interest /

INTRODUCING AIP FOR DEFENSE





Comparing ChatGPT vs Physicians 28th April 2023

Research

JAMA Internal Medicine | Original Investigation

Comparing Physician and Artificial Intelligence Chatbot Responses to Patient Questions Posted to a Public Social Media Forum

John W. Ayers, PhD, MA; Adam Poliak, PhD; Mark Dredze, PhD; Eric C. Leas, PhD, MPH; Zechariah Zhu, BS; Jessica B. Kelley, MSN; Dennis J. Faix, MD; Aaron M. Goodman, MD; Christopher A. Longhurst, MD, MS; Michael Hogarth, MD; Davey M. Smith, MD, MAS

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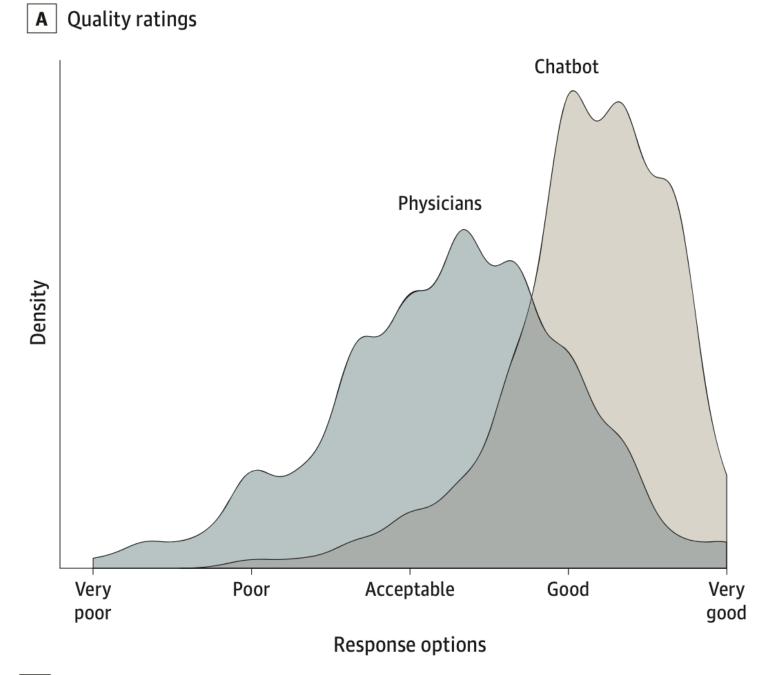
public question. Chatbot res 23, 2022. The original quest chathot responses were eva

fresh session (without prior Limitation: online forums "may not reflect typical patient-physician questions"

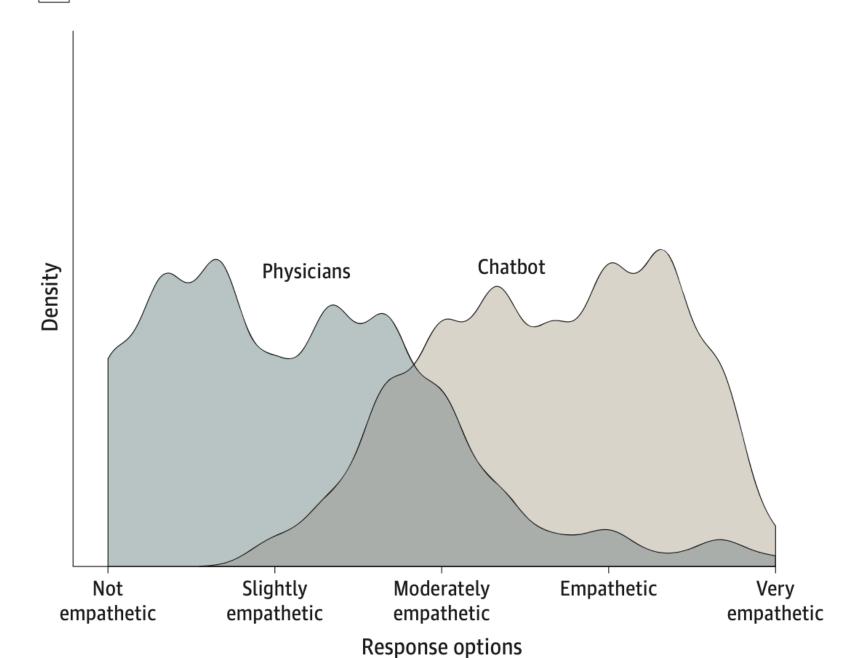
Invited Commentary

Related article

Supplemental content







News Round-Up

GigaChat

Умеет отвечать на вопросы, вести диалог, написать код, нарисовать картинку по запросу. И всё на русском языке



Making the community's best Al chat models available to everyone.







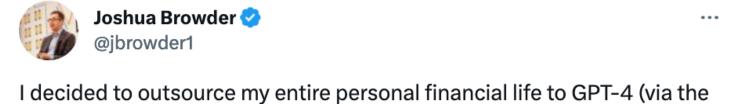
RESH DAVE BUSINESS APR 20, 2023 5:19 PM

Stack Overflow Will Charge Al Giants for Training Data

The programmer Q&A site joins Reddit in demanding compensation when its data is used to train algorithms and ChatGPT-style bots



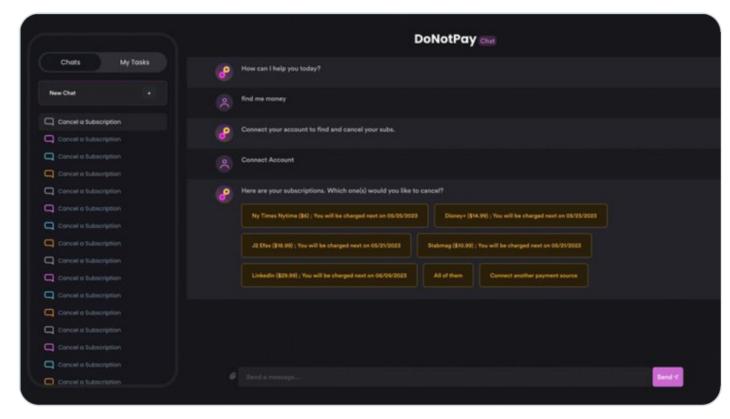
Available from samuel-api.com



SUBSCRIBE

I gave AutoGPT access to my bank, financial statements, credit report, and email.

Here's how it's going so far (+\$217.85) and the strange ways it's saving money. (1/n):



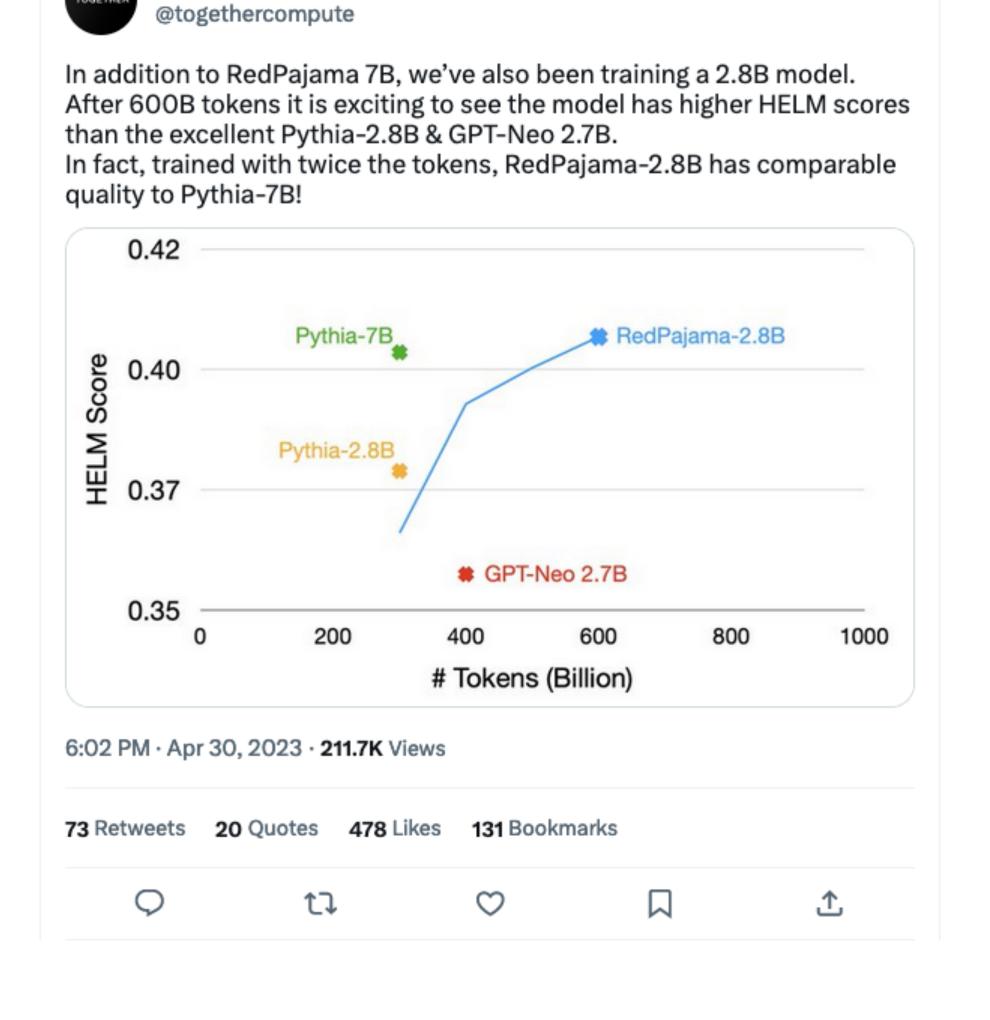
7:00 PM · Apr 29, 2023 · 5.3M Views

@donotpay chat we are building).

2,398 Retweets 787 Quotes 15.1K Likes 16.2K Bookmarks

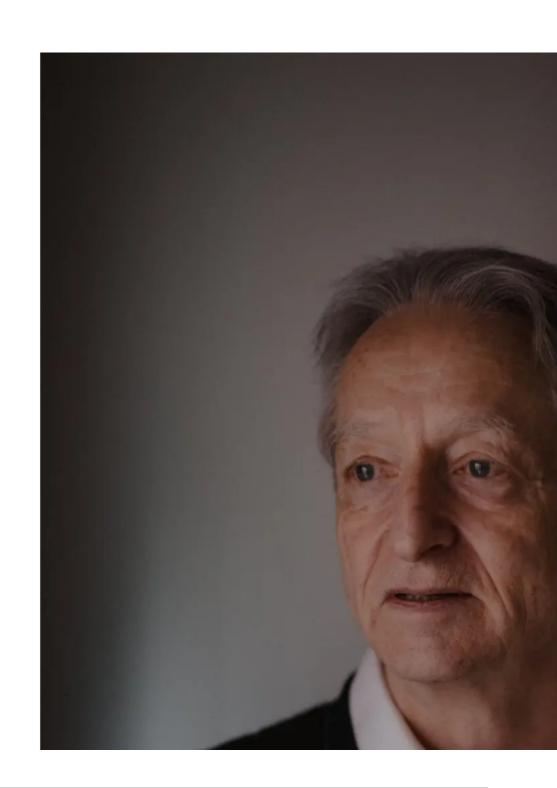
News Round-Up

Together 📀



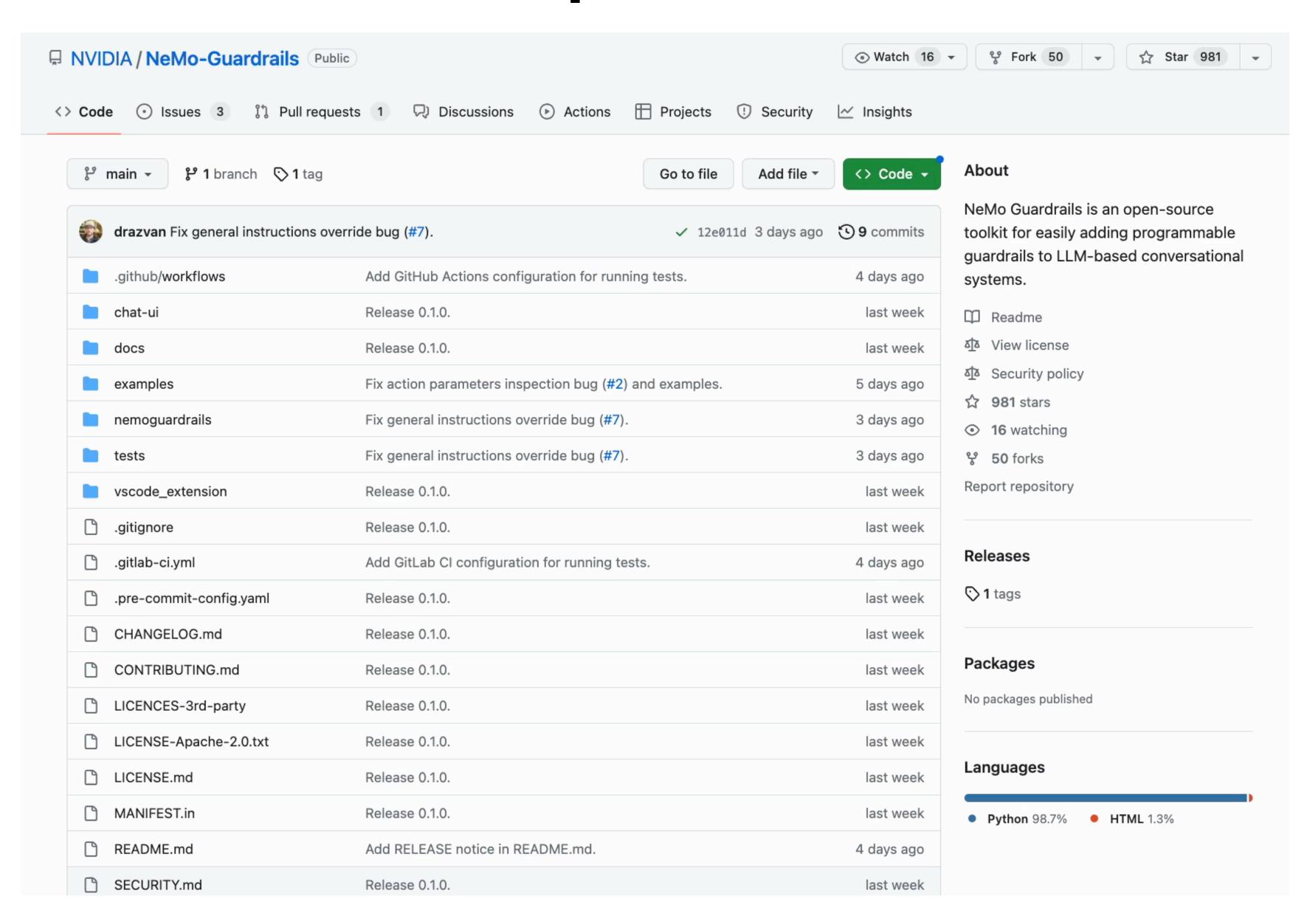
'The Godfather of A.I.' Leaves Google and Warns of Danger Ahead

For half a century, Geoffrey Hinton nurtured the technology at the heart of chatbots like ChatGPT. Now he worries it will cause serious harm.



"I don't think they should scale this up more until they have understood whether they can control it"

Tools Round-Up



Nemo-Guardrails

Keep chatbots on topic & improve security

