

cyberscape: an open source zine
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IF YOU'VE PICKED ONE OF THESE UP BEFORE, YOU KNOW WHAT IT'S ABOUT. WELCOME BACK, THIS TIME IT'S ABOUT THE FUTURE OF AI.

GADFLY AI |

HACKERNOON

IF THIS IS YOUR FIRST TIME, WELCOME IN, GET COMFORTABLE.

CYBERSCAPE IS A ZINE AND DIGITAL ART PROJECT. THE PAGES OF THE ZINE INCLUDE ART, INFORMATION AND ONLINE JOURNEYS.

THE FOLLOWING ARTICLES WERE SELECTED SUBMISSIONS FROM THE GADFLYAI FUTURE OF AI CONTEST THAT MADE US CURIOUS. THIS TIME, WE PARTNERED WITH HACKERNOON TO AMPLIFY NEW AND INTERESTING VOICES FROM AROUND THE INTERNET ON THE FUTURE OF AI. YOU CAN FIND THE ARTICLE AND AUTHOR ON THE EDGE OF EACH PAGE.

THIS ZINE ISN'T SPONSORED BY ANY CORPORATION, INSTITUTION OR ENTITY. WE'RE GADFLY, A COMMUNITY OF DEVELOPERS WHO CARE ABOUT THE SPIRIT OF OF WORKING WITH OTHER PEOPLE. YOU CAN LEARN MORE ABOUT US AND HOW TO JOIN OUR TEAM IN THE BACK. WE WANT PEOPLE TO KNOW HOW THEY CAN GET INVOLVED IN THE DIGITAL WORLD, SHARE THEIR PERSPECTIVES AND RAISE THEIR VOICES TO CREATE A MORE INCLUSIVE INTERNET FOR EVERYONE.

FOR THE DIGITAL EXPERIENCE OF THIS ZINE, USE THE QR CODE ON EACH PAGE TO REACD THE FULL ARTICLE OF EACH OF THESE TOPICS ON THE FUTURE OF AI.

IT WORKED.
HERE'S THE STATS BEHIND THESE 16 GLOSSY PAGES FOR THE MONTH OF AUGUST 2023, ALONE:

TOTAL STORIES PUBLISHED: 125
TOTAL READS: 212,668
TOTAL READING TIME: 23D:3H:1M

HOW TO ENJOY THE FUTURE OF TECH



| Article Title | readingTime |
|--|-------------|
| Lean AI Can Revolutionize Venture Capital Investment | 1D:15H:39M |
| How to Make Any LLM More Accurate in Just a Few Lines of Code | 1D:8H:44M |
| Decoding the Future: 50 AI Statistics Highlighting Marketing's Transformation In 2023 | 1D:4H:14M |
| The Future of AI Writing Contest by Gadfly AI | 1D:1H:23M |
| OpenAI Levels Up: Dive Deep into the Exciting Updates of ChatGPT! | 0D:23H:53M |
| Harnessing AI: 28 Innovative Marketing Strategies. | 0D:21H:28M |
| AI Shouldn't Have to Waste Time Reinventing ETL | 0D:17H:12M |
| Creating a Domain Expert LLM: A Guide to Fine-Tuning | 0D:14H:18M |
| How to Structure Your Machine Learning Team for Success | 0D:13H:57M |
| The Future of Artificial Intelligence (AI) | 0D:13H:36M |
| A Beginner's Guide to Using Large Language Models (LLMs) With the PaLM API | 0D:13H:3M |
| What are the Best Free AI Art Generators of 2023? | 0D:11H:27M |
| GPT-LLM Trainer: Enabling Task-Specific LLM Training with a Single Sentence | 0D:9H:58M |
| Africa: AI and Security | 0D:9H:58M |
| Karl Friston's AI Law is Proven: FEP Explains How Neurons Learn | 0D:9H:34M |
| From Pixelated to Perfect: Comparing 7 AI Upscalers | 0D:9H:21M |
| AutoGPT - LangChain - Deep Lake - MetaGPT: Building the Ultimate LLM App | 0D:8H:59M |
| New Neuroscience Discovery Validates Groundbreaking AI Whitepaper | 0D:8H:36M |
| Fine-Tuning GPT-3.5: A Practical Python Example | 0D:8H:12M |
| I Created a Mobile App That Turns People Into Giga Chads and Memes With AI | 0D:7H:51M |
| Critical Thinking to AI: Are you a Friend or Foe? | 0D:7H:10M |
| Dingo: A Microframework for Building Conversational AI Agents | 0D:6H:45M |
| AI-Powered Cybersecurity: Top Use Cases in 2023 | 0D:6H:43M |
| Natural Language Processing Is a Revolutionary Leap for Tech and Humanity: An Explanation | 0D:6H:29M |
| The Future of Cybersecurity in the Age of AI: Developers vs Generative AI? | 0D:6H:24M |
| A Look Inside OpenAI's Web Crawler and the Continuous Missteps of the FTC | 0D:6H:9M |
| It's Not the Machines, Dummy - It's Our Sociopolitical-Economic System | 0D:5H:47M |
| Automating the Automation: Can AI Fully Take Over the Data Scraping Process? | 0D:5H:19M |
| AI Will Not Replace You, But The Person Using AI Will | 0D:5H:0M |
| We're Building an Open-Source LLM/AI API Wrapper: Here's Why | 0D:4H:47M |
| How to Extract and Generate JSON Data With GPTs, LangChain, and Node.js | 0D:4H:40M |
| Generative AI: the Good and the Bad, a Midjourney Experience | 0D:4H:23M |
| LLMs Don't Understand Negation | 0D:4H:9M |
| Vicuna: How Does It Compare to Llama, Alpaca, and ChatGPT? | 0D:4H:7M |
| How AI Will Impact Teacher-Student Relationships: A Conversation With Professor Lance Cummings | 0D:4H:6M |
| Realistic Text-to-Speech Voice Synthesis: Comparing Tortoise and Bark | 0D:3H:53M |
| Amazon Falcon Lite vs OpenAI ChatGPT - The Large Language Model Battle | 0D:3H:51M |
| Life 3.0: Harnessing AI to Enhance Consciousness and the Human Experience | 0D:3H:49M |
| "Embeddings Aren't Human Readable" And Other Nonsense" | 0D:3H:48M |
| The Impact of AI on Transportation: An Interview with Sam Sklar | 0D:3H:47M |
| A Hitchhiker's Guide to the Future of AI | 0D:3H:45M |
| It's Like if Midjourney Had an API" - Taking a Look at Kandinsky 2.2" | 0D:3H:44M |
| The Convergence of AI and Blockchain: A Game Changer in the Tech Industry | 0D:3H:38M |
| How to Chat With Your Data Using OpenAI, Pinecone, Airbyte and Langchain: A Guide | 0D:3H:27M |
| 🚀 HackerNoon Future of AI Contest: Mid Contest Review 🚀 | 0D:3H:21M |
| Technology Now Knows More About Our Sexuality Than We Do | 0D:3H:17M |
| How to Prioritize AI Projects Amidst GPU Constraints | 0D:3H:6M |
| How to Use Hasdx to Create an AI-Generated Adult Coloring Book | 0D:3H:0M |
| Enterprises Capitalize on Generative AI as It Emerges as the Ultimate Revenue Generator | 0D:2H:58M |
| Could Wall Street's 'Roaring 20s' be Powered by Undervalued Generative AI Stocks? | 0D:2H:58M |
| The Transformative Influence of AI: 6 Revolutionary Breakthroughs | 0D:2H:57M |
| Davinci Is Bad at Maths: Fine-Tuning ChatGPT Models With NodeJs and OpenAI v4 | 0D:2H:57M |
| The Future of Gaming with New AI-Powered Anti-Cheats | 0D:2H:55M |
| Why Virtual Reality Technology Has Been Waiting for Generative AI to Reach Its Potential | 0D:2H:54M |
| How Effective is ChatGPT in Teaching English? | 0D:2H:50M |
| Running the Turing Test on Myself | 0D:2H:34M |
| The Rise of AI Generated Films: Lights, Camera, Algorithm! | 0D:2H:32M |
| Deepfake Voices: AI's New Playground | 0D:2H:31M |
| How AI will Influence Learning: An Interview with Dr Thomas Dietterich | 0D:2H:26M |
| US Intelligence Seeks to Identify Large Language Model Security Risks | 0D:2H:24M |



The question is, if you have an emerging technology, how do you get to know - really know - what it's about, at the cutting edge, in one month or less. Here's the top read articles, and their readtime. Almost a month's worth of reading was produced by the global developer community around the Future of AI, and all in just one real month.



THIS MONTH, WE LOVE THE DATA VISUAL FROM REZILLION'S REPORT: THE RISK OF GENERATIVE AI AND LARGE LANGUAGE MODELS.

PROJECT AGE AND MATURITY: INFANCY STAGE: A SIGNIFICANT PORTION OF THE PROJECTS ARE IN THEIR INFANCY, AGED BETWEEN 2 TO 6 MONTHS, INDICATING A VIBRANT AND RAPIDLY EVOLVING LANDSCAPE.

POPULARITY VS. MATURITY: INTERESTINGLY, A PROJECT'S POPULARITY, DENOTED BY GITHUB STAR COUNT, DOESN'T ALWAYS ALIGN WITH MATURITY. THE RESEARCH PAINTS A PICTURE WHERE MANY POPULAR PROJECTS ARE RELATIVELY YOUNG, WITH A FREQUENT SCORECARD SCORE HOVERING AROUND 4.5 TO 5 FOR PROJECTS THAT ARE TWO MONTHS OLD.
SCORECARD INSIGHTS

HIGH-RISK ALERT: THE SECURITY LANDSCAPE APPEARS TO BE A HIGH-RISK TERRITORY, WITH NO PROJECT SCORING ABOVE A 6.1 IN THE SECURITY SCORECARD. THE MOST POPULAR KID ON THE BLOCK, AUTO-GPT, DESPITE BOASTING NEARLY 140,000 STARS, FINDS ITSELF IN A PRECARIOUS POSITION WITH A SCORE OF 3.7.

THE COVER IMAGE SHOWS THE CORRELATION BETWEEN RISK AND POPULARITY: BUCKING THE EXPECTED TREND, THE RESEARCH UNVEILS A REVERSE CORRELATION BETWEEN POPULARITY AND SECURITY SCORE, URGING STAKEHOLDERS TO LOOK BEYOND THE STAR COUNT WHEN GAUGING A PROJECT'S CREDIBILITY. THAT'S RIGHT, THE MORE GITHUB STARS, THE LESS SECURE IT IS.

READ THE FULL REZILLION REPORT, IT'S WORTH YOUR TIME.

OpenSSF Scorecard was used in this study. It is a great way to see if an open source repository has secure best security practices.





NASA's AI

Exploration Initiative:

NASA is actively engaged in a multi-year effort known as the AI Exploration Initiative. This initiative's primary objective is to advance and implement AI technologies within the realm of space exploration. It centers around four key focal points: autonomous systems, data science, human-AI collaboration, and risk evaluation.

ESA's Program for Artificial Intelligence in Space Exploration (ARTES): The ARTES program, initiated by the European Space Agency constitutes a series of activities dedicated to the development and application of AI technologies in the context of space exploration. This program concentrates on four principal domains: autonomous systems, robotics, data analysis, and risk assessment.

THE DEEP SPACE ATOMIC CLOCK (DSAC) PROJECT: THE DSAC INITIATIVE IS IN THE PROCESS OF CREATING AN ATOMIC CLOCK DESIGNED FOR FORTHCOMING SPACE MISSIONS. THIS ADVANCED CLOCK RELIES ON AI-DRIVEN ALGORITHMS TO MINIMIZE ITS SIZE AND POWER PREREQUISITES.

CREW INTERACTIVE MOBILE COMPANION (CIMON): CIMON OR CREW INTERACTIVE MOBILE COMPANION IS A UNIQUE ROBOT ON THE INTERNATIONAL SPACE STATION (ISS) THAT HELPS ASTRONAUTS. SHAPED LIKE A HEAD, IT CAN HEAR AND SEE, AND IT'S POWERED BY AI. ITS JOB INCLUDES FINDING THINGS, KEEPING TRACK OF SUPPLIES, RECORDING EXPERIMENTS, TAKING VIDEOS, AND SNAPPING PICTURES. CREATED BY AIRBUS AND THE GERMAN AEROSPACE CENTER, CIMON MAKES LIFE AND WORK EASIER FOR ASTRONAUTS IN SPACE.

THESE ACTIVITIES ARE JUST A GLIMPSE OF THE NUMEROUS ONGOING ACTIVITIES IN AI AND ML FOR SPACE EXPLORATION HOWEVER, THERE ARE SO MANY OTHER DISCOVERIES AND ACTIVITIES IN THE RELATED FIELD.

THE FIRST MEDIA FANZINE WAS A STAR TREK FAN PUBLICATION CALLED SPOCKANALIA, PUBLISHED IN SEPTEMBER 1967 [14][15] BY MEMBERS OF THE LUNARIANS.



TURNING DISRUPTION INTO OPPORTUNITY:
STACKOVERFLOW'S TRANSFORMATIVE
PILOT

When it comes to code generation, the model does not really “know” the underlying concepts behind programming but is predicting results based on its training with a ton of text data. The consequence of this is the GitHub Copilot feedback above – it is sometimes good at generating the base code you need, but its ability to actually understand code, debug and provide you explanations is limited. This will get better over time but it’s hard to say if it will ever get to the point of high accuracy / high reliability.



StackOverflow CEO Prashanth Chandrasekar describes it succinctly:

One problem with modern LLM systems is that they will provide incorrect answers with the same confidence as correct ones, and will ‘hallucinate’ facts and figures if they feel it fits the pattern of the answer a user seeks.

At some point you’re going to need to know what you’re building. You may have to debug it and have no idea what was just built, and it’s hard to skip the learning journey by taking shortcuts.

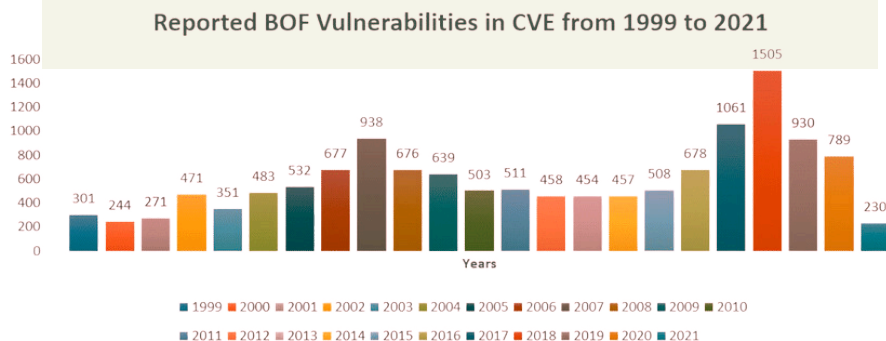
Providing high accuracy / high-reliability answers...OverflowAI is designed to directly tap into this opportunity.

What OverflowAI does

There are three key facets they are betting on – direct answers to questions, usability from within developer environments, and supercharging knowledge within enterprises.

OverflowAI Search provides direct answers to users in a Q&A format (similar to ChatGPT), but provides several links to actual StackOverflow posts. Besides helping create trust, this also provides users with the opportunity to go deeper where the answer provided by AI does not fully solve the user’s problem.

This strikes the delicate balance of giving a direct answer when the question is simple, but also guiding the user along a more exploratory path for difficult questions.



LIGBY BALAGOPALAKRISHNAN WRITES ONE DEEP TOPIC A WEEK ON SUBSTACK:

[HTTPS://THISISUNPACKED.SUBSTACK.COM](https://thisisunpacked.substack.com)

SUBSCRIBE, IT'S VERY GOOD STUFF.



Large language models (LLMs) like GPT-4 have ushered in a new era of generative AI. However, a global GPU shortage is posing a significant challenge for developers. This scarcity of high-end GPUs has prompted cloud providers like AWS and Azure to impose quota systems.

To address this bottleneck, a novel Contribution Per GPU framework is proposed. This framework comprises four key steps:

1. Contribution: **Identify your North Star metric (e.g., number of users, revenue)**. This is the contribution of each product or feature, something that encapsulates the essence of its worth
2. Number of GPUs Required: Gauge the number of GPUs needed for each product or feature
3. Calculate Contribution per GPU: Break it down to the specifics. How does each GPU contribute to the overall goal?
4. Prioritize Products Based on Contribution per GPU: Rank your products by their Contribution per GPU, and then line them up accordingly.

Focus on the products with the highest Contribution per GPU first. This approach ensures that your limited resources are channeled into the areas where they'll make the most impact per GPU. It offers advantages such as data-driven decision-making, improved resource allocation, and clarity in project prioritization, ensuring long-term success amidst evolving constraints.

Common carbon footprint benchmarks

in lbs of CO2 equivalent

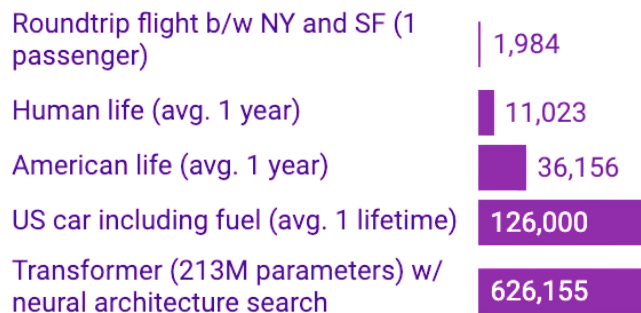
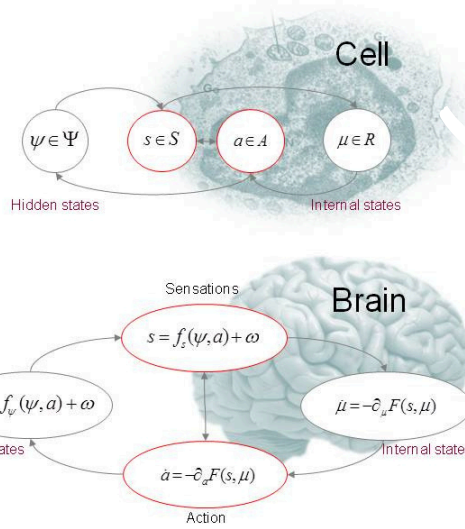


Chart: MIT Technology Review • Source: Strubell et al. • Created with Datawrapper



ENERGY EFFICIENCY THROUGH COMPLEXITY MINIMIZATION

ONE OF THE MOST FASCINATING ASPECTS OF DR. KARL FRISTON'S ACTIVE INFERENCE AI, BASED ON THE FREE ENERGY PRINCIPLE, IS HOW IT NATURALLY MINIMIZES COMPLEXITY. INSTEAD OF RELYING ON MASSIVE DATA LOADING, IT CAN TAKE ANY AMOUNT OF DATA AND MAKE IT SMART WITHIN THE DISTRIBUTED NETWORK AS INDIVIDUAL INTELLIGENT AGENTS CONTINUOUSLY UPDATE THEIR INTERNAL MODELS.

IN THE SAME WAY THAT THE VOLTAGES IN THE BRAIN ARE QUITE SMALL, THIS **SELF-ORGANIZING** APPROACH WORKS JUST LIKE NATURAL INTELLIGENCE, WITH LOWER ENERGY REQUIREMENTS.

THE HUMAN ADULT BRAIN IS REMARKABLY ENERGY EFFICIENT, OPERATING ON JUST 20 WATTS—LESS POWER THAN A LIGHTBULB. IN CONTRAST, POPULAR AI SYSTEMS LIKE CHATGPT HAVE MASSIVE ENERGY DEMANDS. **WHEN FIRST LAUNCHED, CHATGPT CONSUMED AS MUCH ELECTRICITY AS 175,000 BRAINS.** WITH ITS METEORIC RISE IN USE, IT NOW REQUIRES THE MONTHLY ENERGY OF 1 MILLION PEOPLE. THIS INTENSE CARBON FOOTPRINT STEMS FROM THE VAST COMPUTATIONAL RESOURCES REQUIRED TO PROCESS HUGE AMOUNTS OF TRAINING DATA OF MACHINE LEARNING. THE UNIVERSITY OF MASSACHUSETTS AMHERST REPORTED THAT "TRAINING A SINGLE A.I. MODEL CAN EMIT AS MUCH CARBON AS FIVE CARS IN THEIR LIFETIMES." REFERRING TO A SINGLE TRAINING INSTANCE, YET MODELS ARE TRAINED REPEATEDLY AS THEY ARE IMPROVED.



THE EXPONENTIAL GROWTH OF AI IS COLLIDING WITH SUSTAINABILITY. ACTIVE INFERENCE AI OFFERS A PATH TO INTELLIGENCE THAT MINIMIZES COMPLEXITY AND ENERGY, PROMISING A PROFOUNDLY SCALABLE AND COST-EFFECTIVE PATH TO ARTIFICIAL GENERAL INTELLIGENCE. **BY MIMICKING BIOLOGY, WE CAN NURTURE AI THAT THINKS AND LEARNS WHILE PROTECTING THE PLANET.**

Human Intuition and Positive Action

It's interesting to note that humans, much like machines, often find it easier to follow explicit, positive instructions. When we are given a clear directive, our minds don't need to filter through the myriad of possibilities that negative instructions might entail.

GPT's Affinity for Positive Instructions

GPT's behavior reinforces this pattern in the realm of AI. When tasked with positive instructions, it seems to find a straightforward path to generating a suitable response. With its training data and predictive nature, GPT excels when it can latch onto a clear guideline about what it should do, as opposed to what it shouldn't.

Drawing Insights

The differential behavior of GPT when faced with positive versus negative instructions offers invaluable insights for users. It points towards the importance of precise, clear prompt engineering to guide the model towards the desired outcome. And while GPT's behavior might seem counterintuitive at times, understanding its strengths and limitations ensures a more effective interaction.

The Role of Negation in Language

In human language, negation can be a powerful tool. A simple addition of the word "not" can invert the meaning of a statement. This nuance, however, isn't always easily translated into a predictive model. This is especially true when the negation is followed by an otherwise familiar and straightforward directive, like "answer with 'yes'".

Challenges for LLMs

- **Training Data Overlaps:** The presence of both positive and negative instances of similar instructions in the training data can sometimes confuse the model.
- **Weighing the 'Not':** In terms of word prediction, "not" is just another token for GPT. While it does weigh the context, the absolute transformative power of "not" might not always be captured to its fullest.
- **Pattern Matching Over Semantics:** LLMs lean heavily on pattern recognition. They often prioritize matching patterns they've seen before over deeply grasping the semantic implications of a given instruction.



With technology developing at a faster rate than many African countries can keep up with, the continent is left particularly vulnerable to some of the key risks posed by the growth of AI technologies. For example, the **Malabo Convention**, a framework designed to deal with cybersecurity measures across Africa, has been adopted by only 15 countries. And as a country that is more a consumer than a producer of AI technologies, they are left open to being unduly shaped by Euro-centric development.

However, one thing that may go unnoticed is that Africa is leading the way in something that is considerably more advanced. We have seen Western policymakers and companies spend years and huge amounts of resources to retrospectively design regulations, hire staff to police their content, and fight legal battles over data. This is because the progress of these developments has been driven by capitalism and to an extent publicity and media, which creates excitement as well as quick financial wins. However, when left without structure, they quickly start creating unimaginable risks to both the minds of our youth and the social fabric of our communities.



So, when African countries, who are often more deeply rooted in traditions and religion, raise concerns – though many in the Western world may see this as going backwards, when applied to creating policy and regulations, it is actually one of the most forward-thinking things you can do. One example of this is the Conformity Assessment Framework within The Gambia. This ensures that thorough checks are made of each piece of technology and equipment that comes into the country, checking spyware and algorithms embedded within them to protect the country from undesirable influences.

If we can create a **global standard regulation**, this can pave a pathway for many countries to match up and catch up. That is to say, Western countries can catch up to some of the detailed regulatory measures that are being developed in other parts of the world, while African countries can match up some of their key technological developments with the global best. Creating best practices and regulations, regularly updating these platforms and **making sure they are informed from a global perspective regarding culture, tradition and values – this is what will create the change we need on the AI scene**

INFLATION, CLIMATE CHANGE, THE WAR IN EUROPE, SUPPLY CHAIN DISRUPTIONS, AND THE COVID-19 PANDEMIC, TO NAME A FEW-HAVE MERGED INTO WHAT EXPERTS HAVE CALLED A "POLYCRISIS." **THEY HAVE FROZEN MUCH OF THE CONFIDENCE IN PLACE.** NO WONDER VENTURE CAPITALISTS HAVE STARTED PULLING BACK ON POTENTIAL INVESTMENTS.

BLAZE THROUGH TRIAL PERIODS

PROponents OF LEAN AI ASK – WHAT IF WE COULD SKIP ALL THAT? WHAT IF A STARTUP COULD ‘KNOW’ ITS BUSINESS MODEL AND OPERATING COSTS IMMEDIATELY WITHOUT HIRING TONS OF PEOPLE TO FIGURE ALL THAT OUT?

JUST IMAGINE IF A VC COULD PICK AND CHOOSE WHICH STARTUPS DON’T NEED TO PIVOT THIS WAY AND THAT AND DON’T HAVE TO BLOW THROUGH GOBS OF CASH AND LOADS OF HIRING.

IMPOSSIBLE, YOU MIGHT THINK. SOME THINGS REQUIRE TRIAL AND ERROR. EXCEPT THAT MACHINES DON’T.

WE ARE SEEING AN EMERGING FORM OF AI THAT CAN SOLVE THESE PROBLEMS. WE’RE NOT TALKING ABOUT MASSIVE, CHANGE-THE-WORLD AI (LIKE ROBOTS THAT TAKE OVER OUR JOBS). WE’LL GET THERE SOMEDAY.

FOR NOW, WE’RE TALKING ABOUT A LEAN FORM OF AI THAT CAN BE DESIGNED TO HELP STARTUPS BLAZE THROUGH THEIR TRIAL PERIODS.

THIS AI CAN RUN THROUGH SCENARIOS AND DETERMINE MARKETING COSTS AND SUPPLY CHAIN THRESHOLDS. INSTEAD OF FOUNDERS POURING OVER SPREADSHEETS OR PLAYING AROUND WITH REAL-TIME MEDIA DASHBOARDS, MACHINES CAN USE UBER-EFFICIENT ALGORITHMS.

ALGOS ALWAYS WIN. AND FOUNDERS CAN START RUNNING THEIR COMPANIES WITH HIGHER PREDICTABLE ODDS OF BECOMING THE NEXT TECH STARTUP UNICORN.



THE IMPACT OF AI ON TRANSPORTATION:

EDSEM GOLD INTERVIEWS SAM SKLAR

How do strike a balance between employing the use of AI to design and implement better road networks and preserving the cultural heritage of Cities?

Sam: I'm going to change the last part of your question. I don't think we're out here to preserve the cultural heritage of Cities. Part of what makes cities livable is their mutability—we can change things and we can keep things. Part of what makes cities desirable is their history and their ability to help citizens connect to the past. I think preservation is a relative bunk as a lens to see cities through, but I also think too rapid a change can kill a city. So that's the balance I want to talk about.

I think we have a choice to make relatively soon if we want to go all in on building out our cities to become the hearts of the Internet of Things (IoT) or the epicentres of Vehicle-to-Everything (V2X) connectivity. Putting a sensor everywhere is what we want. Marking more spaces for driving or parking—that's what we want?

The question is do we want to spend billions or trillions of dollars to remake our cities in the image of "How can this car get around most efficiently?" rather than "How can this person get around safely, reliably, and with dignity."

The answer is to pour our resources into a system that favours mode choice and emphasizes shared, carbon-neutral and shared, carbon-neutral options. Bikes, buses, trains, walking(!). How can AI help us achieve this goal?

THE WAKANDAN MAGLEV TRAIN



How might AI assist in designing more inclusive transportation systems for disabled citizens?

Sam: This is also an essential question and I think I know where you're going with this: operability of personal vehicles for people with low/no vision or people with mobility challenges, like limited limb movement or some form of paralysis. There are huge gains in mobility options and accessibility choices for these people with the advent of AI-powered vehicles.

But AI might be integrated into other forms of ability-granting tech—think wayfinding or getting around. With or without a personal vehicle, people need to navigate a space; everyone's a pedestrian for some part of their trip. So enhancing mapping features with up-to-date, real-time features might help a blind person make a safe choice instantly. Or building signage that can give real-time traffic conditions to know when it's safe to walk or cross a street. There might be a more tactile way to engage—curb cuts might be built with AI-powered changes to colour or feel depending on road conditions.

At this point, if we can think it and keep all users of all ages and all abilities in mind, then we can make sure that we're building roadways for people.

THE FREE SOFTWARE ZONE

SEN HASTINGS INTERVIEWS RICHARD STALLMAN

SEN HASTINGS: YOU ARE ENTERING THE FREE SOFTWARE ZONE, MAKE NO MISTAKE ABOUT IT THIS AINT' YO PARENT'S OPEN SOURCE, IT'S MUCH STRONGER, BARREL AGED EVEN, AND DISTINGUISHES ITSELF AS A MORAL APPROACH INSTEAD OF A PRAGMATIC ONE. BUT I KNOW WHAT YOU ARE THINKING, DEAR HYPOTHETICAL READER: "WAIT, IF FREE SOFTWARE ISN'T OSS, AND THIS IS AN OSS ZINE, WHY YA PUTTIN' CHOCOLATE IN MY PEANUT BUTTER MIZ'?"

BECAUSE IT TASTES DELICIOUS. BUT HONESTLY, EVEN THOUGH WE AREN'T QUITE THE SAME, WE WIND UP WORKING ON A LOT OF THE SAME STUFF TOGETHER. AND THAT MAKES THE WORLD A BETTER PLACE. SO BUCKLE UP, YOU MIGHT JUST LEARN A THING OR 2.

STALLMAN ON GENERATIVE IMAGES:

I MEAN, COPYRIGHT IS A SIDE ISSUE AS REGARDS WRITING AND ART.

IT'S NOT COPYRIGHT THAT MAKES SOMETHING ART.

AND IT'S NOT COPYRIGHT THAT MAKES SOMETHING GOOD ART OR BAD ART.

STALLMAN ON COPYRIGHT OF ARTISTIC WORKS

I DON'T WANT TO GIVE STAR AUTHORS AND ARTISTS AND MUSICIANS ADDITIONAL LEGAL MONOPOLY POWER.

AND ESPECIALLY, I DON'T WANT TO GIVE IT TO THE BUSINESSES THAT END UP OWNING OR MONOPOLIZING THOSE COPYRIGHTS.

BECAUSE THEY'RE THE ONES WHO ARE REALLY GOING TO HAVE THE POWER.

AND YOU'LL NOTICE IN THE PAST YEAR OR TWO, A LOT OF FAMOUS SONGWRITERS HAVE SOLD THE COPYRIGHTS ON THEIR WORK TO BIG BUSINESSES.

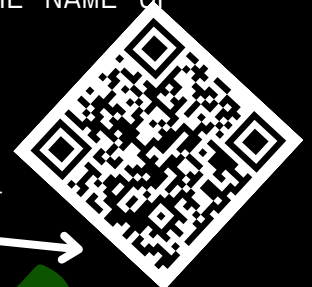
BUT IT'S NORMAL, THOUGH, IT'S BEEN THIS CASE FOR DECADES THAT BIG BUSINESSES WILL OWN THE PHONO-RECORD COPYRIGHT ON THE RECORDINGS THAT THEY HAVE MADE.

SO, DON'T IMAGINE THAT YOU'RE GIVING MORE POWER TO SOME MUSICIAN THAT YOU MIGHT ADMIRE.

IT'S GOING TO BE ENJOYED BY A BIG BUSINESS IN THE NAME OF THAT PERSON YOU ADMIRE.

AND IT'S GOING TO BE POWER OVER YOU.

LOOK, FLOSSING ISN'T JUST GOOD FOR YOUR TEETH, SOMETIMES IT IS GOOD FOR THE WORLD. TO UNDERSTAND MORE ABOUT FREE/LIBRE OPEN SOURCE SOFTWARE, GO [HERE](#)



READ THIS: STALLMAN.ORG/ARTICLES/MADE-FOR-YOU.HTML



WHY FINE-TUNE?

1. BETTER RESPONSES
2. TRAINING WITH MORE EXAMPLES THAN IN FEW-SHOT-LEARNING APPROACHES (GIVING A FEW EXAMPLES IN THE PROMPT)
3. SHORTER PROMPTS – LOWER COSTS AND LATENCY

OPENAI ALSO LISTS THE FOLLOWING BENEFITS: IMPROVED STEERABILITY, RELIABLE OUTPUT FORMATTING, AND CUSTOM TONE.

YOU CAN FIND ALL OF THE CODE FROM THIS ARTICLE ON GITHUB: [LINK](#). THE CODE IS EXPERIMENTAL AND SEVERAL-USE-ONLY; DON'T EXPECT IT TO BE POLISHED.

FINE-TUNING HAS OPENED UP AN AVENUE TO ACHIEVE MORE SPECIFIC AND CONSISTENT OUTPUTS FROM OPENAI'S MODELS. AS DEMONSTRATED...FINE-TUNING MEETS THE PROMISE OF ACHIEVING SPECIFIC OUTPUTS WITH SHORT PROMPTS.

WHILE FINE-TUNING OFFERS PRECISION, IT DEMANDS CAREFULLY CRAFTED TRAINING DATA TO ENSURE THE MODEL DOESN'T JUST MEMORIZE EXAMPLES.

THIS PROCESS INVOLVES INITIAL INVESTMENTS IN TERMS OF TIME AND MONEY (LUCKILY, WE CAN GENERATE FINE-TUNING DATA WITH MORE CAPABLE MODELS). MOREOVER, THE QUALITY OF OUTPUTS SHOULD BE CONTINUOUSLY ASSESSED TO ENSURE THEY MEET THE REQUIRED STANDARDS.

FOR BUSINESSES OR PROJECTS THAT RELY HEAVILY ON THE PERFORMANCE OF LLMS LIKE GPT-4, FINE-TUNING PRESENTS A VIABLE OPTION TO OPTIMIZE PERFORMANCE AND COST.

HARROL HOROSIN

FINE-TUNING GPT-3.5: A PRACTICAL PYTHON EXAMPLE

SCAN THIS QR FOR THE
DIGITAL EXPERIENCE OF



CYBERSCAPE: THE
OPEN SOURCE ZINE

THINK OF GADFLY AI IS A BIT OF AN INTERNET THINK TANK. WE RUN FOR ONE MONTH BEFORE TWICE A YEAR, BRINGING TOGETHER TOP MINDS ON IMPORTANT SUBJECTS WITH FOCUS GROUPS, CONTESTS AND PUBLICATIONS.

LOOK FOR US IN PRINT AND ONLINE **AUGUST/SEPTEMBER 2023** AND **APRIL/MAY 2024**

Special thanks to from the Technical Director **Sal Kimmich** to:

Anova Hou, our Creative Director, for the genius behind a zine for the modern technologist. They've been my favorite artist for years. Open source is the reason you get to see us work together
Sen Hastings for always keeping it real with free like freedom energy, and understanding more about hardware than I ever will.
Nikita Koselev, Open Source Relations Manager for bringing so many voices together for such lovely chats about the future.



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CYBERSCAPE IS A ZINE AND DIGITAL ART PROJECT. THE PAGES OF THE ZINE INCLUDE ART, INFORMATION AND ONLINE JOURNEYS TO DELIGHT THE COMMON CITIZEN AS MUCH AS AN OPEN SOURCE DEVELOPER. THERE'S A LOT OF GOOD FUN, HEART, AND A LITTLE SOMETHING TO LEARN ABOUT HOW **YOU CAN CHANGE THE WORLD FOR THE BETTER, WITH A KEYBOARD.**



A gadfly is a person who interferes with the status quo of a society or community by posing novel, potentially upsetting questions, usually directed at authorities. The term is originally associated with the ancient Greek philosopher Socrates in his defense when on trial for his life.