Links für 2024 KW 3

Meine „Wollte ich noch Lesen"-Liste, zusammengefasst von Neural Chat.

Being Poor Doesn't Have the Same Effect as Living in Chaos:

A short summary of this article discusses a recent study that examined the lives and outcomes of children who were in foster care and those from low socioeconomic backgrounds. The study found that while both groups face similar challenges, the instability in their early lives was a bigger predictor for risky behavior in adulthood than poverty. It concluded that fostering stability in these children could greatly reduce the likelihood of them engaging in criminal activity or other harmful behaviors later in life.

The lazy technologist's guide to weight loss:

1. What were your initial goals for losing weight? 2. How did you plan your daily diet and exercise routine? 3. Which factors contributed the most to your successful weight loss journey? 4. How did you maintain a healthy lifestyle without feeling restricted? 5. Can you provide a sample weekly meal plan from your journey? 6. What are your future goals for fitness, after reaching your initial target weight?

How a baker survived the Titanic by getting spectacularly drunk:

110 years ago today, the Titanic collided with an iceberg leading to its sinking. Among the survivors was chief baker Charles Joughin who famously stayed calm and got drunk during the disaster. He delayed immersion, survived cold shock, found an overturned lifeboat and swam his way out of history's worst maritime disaster by staying focused on his survival strategy despite being significantly intoxicated. Experts say alcohol could have provided Joughin with „liquid courage," increasing his sense of fearlessness and lessening the sensation of cold.

These fish live beyond 100—and get healthier as they age:

Anglers have long suspected something special about an old fish caught in Arizona's Apache Lake - its age. Recent research has confirmed that a significant majority of buffalofish in this remote desert lake are older than 100 years. This discovery adds to our understanding of the little-studied buffalofish genus, which is made up of five freshwater species native to North America. They were previously thought only to live into their mid-20s, but research in 2019 revealed that bigmouth buffalofish could live up to 112 years, making them the oldest known freshwater teleost fish. More recently, a 127-year-old bigmouth was found in Canada. This makes Apache Lake's buffalofish an exception, as they are not native to Arizona but were introduced there in 1918 as part of a US fishery plan. The fish's long lifespan is believed to be an evolutionary adaptation due to their slow reproduction rate, requiring very specific environmental conditions. Further research into the longevity of buffalofish could provide insight into how vertebrates, including humans, can live longer lives.

Researchers Discover Potential Microbiome Links to Skin Aging:

Recent research into the skin microbiome, a collection of microorganisms that inhabit our skin, suggests potential links with signs of skin aging and skin health. A collaborative study between the Center for Microbiome Innovation at the University of California San Diego (UC San Diego) and L'Oreal Research and Innovation examined data from 13 studies involving over 650 female participants aged 18 to 70, focusing on crow's feet wrinkles, moisture loss, and other aging signs. The results identified a positive association between microbiome diversity and lateral cantonal lines (crow's feet wrinkles) and a negative correlation with transepidermal water loss. Further investigation into the role of skin microbiomes in aging is expected to uncover potential biomarkers related to visible signs of aging, leading to better understanding and advancements in skincare solutions.

How the placenta evolved from an ancient virus:

Kelsey Coolahan's fascination with the placenta began during her medical studies when she witnessed its complexity firsthand. This temporary organ performs several vital functions for a growing fetus, such as serving as an oxygen and nutrient supplier, waste disposal system, and nutrition source. It also serves as a barrier preventing maternal and fetal bloodstreams from mixing while still allowing essential elements like medicine or antibodies to pass through. The placenta's unique structure is believed to have evolved from ancient retroviruses that infected early egg-laying vertebrates, giving rise to syncytin proteins that fuse cells together to form this remarkable organ. This evolutionary process has resulted in humans now sharing DNA with these once-parasitic viruses, and some scientists speculate that we might even be partially comprised of them. The placenta's role is essential for the development of a successful pregnancy, and understanding its intricate workings could lead to significant breakthroughs in obstetrics, reproductive health, and potentially other areas of medicine.

What happens when you trigger a car's automated emergency stopping?:

The article discusses the issue of drowsy driving and how automakers have integrated systems to detect and prevent it. It explains various warning levels and the eventual automatic emergency stops if a driver becomes unresponsive. Testing both Infiniti QX60 and Mercedes EQE 350, with their Level-2 ADAS capabilities, showed that these systems could indeed bring vehicles with an impaired driver to a safe stop. However, they mentioned the importance of taking proper caution while testing such systems in real-world scenarios and avoiding potentially dangerous situations like highways or interstates.

How an Ugly Single-Page Website Makes $5,000 a Month with Affiliate Marketing:

Diskprices.com is a simple website focused on showing hard disk price discounts from Amazon, created by developer Jeremy Grosser who was initially building a Network-Attached Storage (NAS). Despite its basic appearance and lack of attention to user experience, the site generates around $5,000 in monthly income through paid affiliate links. The website's specific focus on hard drive discounts attracts dedicated users who check it daily, contributing to its success. Its traffic primarily

comes from direct access, SEO, and social media, with a large portion of visitors sharing its links. With roughly 80,000 monthly visits for a single-page site without unique content, Diskprices showcases how a useful product can make marketing easier.

California genocide:

In summary, the California genocide was a series of systematic killings and other acts of violence against indigenous peoples in California during the 19th century. The events were characterized by massacres, enslavement, forced labor, displacement, and other forms of human rights violations committed by various parties including the United States Army, state militias, white settlers, and even some indigenous people themselves. This period began with the American Conquest of California from Mexico in 1846-1848 and was exacerbated by the influx of settlers during the Gold Rush. The violence resulted in a significant decline in the indigenous population due to direct killing, disease, malnutrition, and other factors related to colonization. Historians have debated whether these events constitute genocide under various definitions of the term, with some arguing that it fits the criteria while others dispute this interpretation. Regardless, there is widespread agreement among scholars about the scale and severity of the violence perpetrated against California's indigenous peoples during this time.

Convicted murderer, filesystem creator writes of regrets to Linux list:

Hans Reiser writes about his involvement in developing the Linux filesystem, discussing challenges faced such as balancing tree designs and format changes. He regrets not understanding how to make friends and allies while working on ReiserFS' development. His letter delves into personal aspects like his financial struggles, team members' experiences, and apologies for not treating them well. Finally, he thanks important figures, expresses hope for the future, and reflects on the importance of communication in solving problems.

Ubisoft Says It Out Loud: We Want People To Get Used To Not Owning What They've Bought:

This article discusses the shift from owning products to licensing digital purchases and how some consumers struggle with this concept. Ubisoft's rebranding and introduction of a PC version for its „Classics" tier at a lower price aim to make players more comfortable with not owning their games as part of their subscription service model. While Ubisoft is transparent about the issue, there remains a potential challenge in convincing the general gaming public that they should accept not owning digital games entirely.

Scientific Misconduct and Fraud: The Final Nail in Psychiatry's Antidepressant Coffin:

1). Summary for people with learning disabilities: Some people believe that antidepressant drugs help many people feel better when they are depressed. However, research has shown that these medications often have little effect or even worsen the depression symptoms. One major study, called STAR*D, claimed that nearly 70% of patients who didn't improve with one medication could achieve

remission if they tried another. But later findings showed that this was an overestimation due to scientific misconduct, making the real recovery rate much lower. Some people believe that trusting in these studies may have caused unnecessary harm by focusing on antidepressants rather than other effective treatments.

How An American Helped Iceland Fix Its Teen Substance Abuse Problem:

Twenty years ago, Iceland had some of the highest rates of teenage substance abuse in Europe. Today, the country has one of the lowest rates with minimal alcohol and drug use among young people. This turnaround can be partly attributed to the „Natural Highs" program created by an American psychologist and drug researcher who believed replacing artificial highs with natural ones could help prevent addiction. The Icelandic model involves government, corporate, and tax support for funding programs like this one. The focus on quality family time, healthy recreational activities, and positive peer groups has led to a significant reduction in substance abuse among teenagers in the country. This approach may potentially be replicated in other communities around the world.

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why lowercase letters save data:

Lowercase letters and uppercase letters consume the same amount of data, 1 byte each. Surprisingly, swapping uppercase characters with lowercase ones can save data because it helps compress text more effectively. Text compression involves two methods: Huffman encoding and LZSS. In Huffman encoding, frequently used characters require fewer bits to represent them, thus reducing the file size. Smaller trees in the Huffman tree result from having fewer uppercase letters, further improving compression efficiency. The LZSS algorithm finds repeated sequences of data and replaces them using a pointer, which can be more effective when dealing with lowercase text. Although lowercasing isn't the most significant way to reduce online waste, it still plays a role in optimizing websites for better performance and less energy consumption.

What's that touchscreen in my room?:

1. Short summary: The author discovered an interesting embedded device, which turned out to be an energy monitoring system with an Android tablet acting as its interface. The system faced various security issues that led the person to investigate further. They found an embedded Linux operating system and a Node.js app responsible for displaying usage data in a web UI.

2. Key points:

   1. Embedded device, possibly created by Netthings, serves as an energy monitoring system.
   2. System has a tablet-like Android interface.
   3. The author discovered a security vulnerability involving a TCF Agent and SSH credentials.
   4. Upon gaining access, the individual found an embedded Linux operating system running on an ARM9 processor with Java support.
   5. Node.js app used to display data in a web UI.

3. Additional details: The device comprises two primary parts; the Pulse app for gathering and storing energy usage data, and a Node.js app to present that data to users. Both apps run on an embedded

system with limited internet access. Various unfinished features, including cloud integration and communication with MQTT brokers, were discovered in the code.

Hackers breached Microsoft to find out what Microsoft knows about them | TechCrunch:

Microsoft revealed that a Russian government-linked hacking group called Midnight Blizzard or APT29 targeted corporate email accounts belonging to some of its senior leaders and employees working on cybersecurity, legal, and other functions. The group was interested in learning about what Microsoft knows regarding them rather than stealing customer data or traditional corporate information. The hackers used a „password spray attack" method to breach accounts. Despite not disclosing the number of emails compromised or the stolen information, Microsoft emphasized the need for increased security measures and adaptability amidst potential disruptions.

HP CEO: You're 'bad investment' if you don't buy HP supplies:

HP CEO Enrique Lores admitted the company's goal is to make printing a subscription service. He discussed the ongoing lawsuit against the firm regarding allegations they prevented non-HP branded ink cartridges from working on their hardware through a software update, stating it was done to protect their intellectual property. Lores emphasized that HP prioritizes its customers and their well-being while also acknowledging their business model relies on customers using their supplies.

The European city where selfies are 'awkward':

In Berlin, privacy and living in the moment are highly valued, which has resulted in a less common practice of taking selfies in public spaces. This culture is believed to have developed through its famous club scene and a desire for people to experience and act without being captured on camera. However, as globalization advances, it may lead to more convergence with other countries' attitudes towards privacy. For some Berliners who are part of the influencer world, taking selfies in public remains important for their profession.

Canadian Man Stuck in Triangle of E-Commerce Fraud – Krebs on Security:

A Canadian man named Timothy Barker claims he was falsely charged with orchestrating a complex e-commerce scam known as triangulation fraud. This type of fraud occurs when consumers purchase items online and the seller uses stolen credit card information to buy goods from an online retailer, then sells them on platforms like Amazon or eBay. As Barker was cleared of charges, he now seeks to clear his name in hopes of restoring his reputation and regaining employment opportunities that have been lost due to the criminal arrest record.

DevOps: Don't destroy silos, transform them:

This article challenges the widely held belief that destroying silos within organizations is necessary for

effective teamwork in a DevOps environment. It argues that breaking down silos can create significant cognitive load and make teams less agile. Instead, the focus should be on turning silos into „self-service bars" where each team focuses on their own domain and provides services through intuitive interfaces like APIs or libraries. By understanding Conway's law and prioritizing user experience for other teams as customers, organizations can improve collaboration without needing direct communication between all involved parties.

Backing Up the Power Grid with Green Methanol:

A new approach for storing energy from renewable sources is being developed that converts methanol into hydrogen. This method allows the storage of more energy than with conventional batteries and could be cheaper than underground hydrogen storage in salt caverns. The process involves using equipment to produce hydrogen, methanol, and electricity. It can be scaled up to replace dirty bunker fuel used in big ships and is currently being demonstrated at a 25-megawatt generator in Texas. The integrated methanol system could offer an alternative storage solution for regions where underground storage of hydrogen is unfeasible or slow to develop, potentially making it a favorable choice despite higher costs.

French cheese under threat:

The Termignon blue cheese could potentially save the blue cheese industry from extinction as it hosts an unidentified population of Penicillium roqueforti, an essential microorganism for blue and veined cheeses. This newly discovered strain, found in a small number of French Alp farms, contrasts with standardized production processes which have led to the impoverishment of microbial diversity in mass-produced cheeses. The Termignon blue could offer cheese producers valuable genetic diversity. Meanwhile, Camembert cheese faces an even more precarious situation due to the exclusive use of a single strain of Penicillium camemberti that is incapable of sexual reproduction and has been degenerating over time. A possible solution may include introducing Penicillium biforme, a species similar to P. camemberti with greater diversity, in Camembert and Brie cheeses.

Saving Linux:

A user has written an article that highlights the issues they face when trying to maintain old versions of Linux distributions on computers more than 15 years old. They experienced problems in installing Antix, another distribution, on older computers. The author shares their method for transferring an AntiX installation onto another computer along with extra packages. Despite not being a perfect solution, they believe it is better than other available alternatives. They also offer tips on using Linux for offline purposes and handling personal data.

What is Scalability Anyway? - Marc's Blog:

This article discusses the concept of scalability in systems design and suggests understanding it as a range where adding incremental work incurs approximately constant costs. The author provides examples using single-machine systems, multi-machine architectures, and serverless systems to

illustrate how marginal costs differ across these models. By considering the initial spikes, linearity, and holistic view of cost, designers can better evaluate their system's scalability.

Beginning September 30, 2024: third-party apps that use only a password to access Google Accounts and Google Sync will no longer be supported:

Google is phasing out the use of Less Secure Apps (LSAs) in Google Workspace to enhance user safety and security. These apps require users to share their Google account credentials, making them vulnerable to unauthorized access. Instead, they encourage using Sign-in with Google, which provides a more secure authentication method using OAuth. A timeline for this transition includes the removal of LSA settings from admin consoles in June 2024, followed by disabling access to all Google Workspace accounts on September 30, 2024. Additionally, Google Sync will be sunsetted with users not being able to connect to Google Workspace through it starting September 30, 2024. To ensure continued access, users must switch to OAuth or alternative methods for connecting their apps and devices to their Google accounts.

Toot by researchfairy:

Summary of Mastodon thread by @researchfairy: Microsoft instituted a new policy limiting academic accounts at McGill University to 20GB of cloud disk space. This is due to environmental concerns, as large amounts of unused files and data stored on OneDrive servers have a negative impact on the carbon footprint. The decision affects students and researchers who need more storage for their work and data sets for CIHR requirements. Alternative storage solutions must be investigated if more than 20GB is needed, while the McGill-approved data storage guidelines should be reviewed.

Why Holes at the Bottom of the Ocean Disappear and Reappear:

In the North Sea's German Bight, scientists have been studying unusual pockmarks in the ocean floor. Previously believed to be caused by methane gas rising through the sediment, a new study suggests that these marks might actually be caused by harbor porpoises and sand eels. After analyzing the area using sound-based technologies, satellite imagery, and behavioral biology, researchers discovered that the shapes of these pockmarks did not resemble those caused by gas. Instead, they found evidence that these holes were formed due to the activities of marine animals such as porpoises searching for sand eels to feed on. Further research is required to confirm this theory completely and understand the role of biological life in shaping the seafloor.

Writings of sussman@:

The author recalls the early days of working at Google when it had a unique culture that valued employees above all else and prioritized their growth within different projects without layoffs. However, as revenue slowed down during the pandemic and business strategies changed, the company transitioned to a more typical „culture of limited resources." This shift was marked by cuts in perks, changes in hiring and promotion processes, and larger-scale restructuring with layoffs followed by rehiring in new important projects. The author reflects on the impact of this change and

urges companies to learn from Google's former emphasis on employee value, suggesting that prioritizing employees can lead to increased morale, productivity, and creativity.

The Problem is Not Plagiarism, but Cargo Cult Science:

This article highlights a widespread issue in academia with respect to Cargo Cult Science - an approach where people pretend to be doing genuine scientific work while lacking true understanding or integrity. It focuses on two cases of alleged academic misconduct: Claudine Gay's study and Neri Oxman's thesis. Both women were accused of plagiarism, but the article argues that their primary issue is not with plagiarism but Cargo Cult Science itself. The authors argue that changing top management in such institutions doesn't fix the problem, as it is an inherent flaw within the system itself. They suggest that academic institutions and peer review processes should focus more on the quality and rigor of research rather than surface appearances to truly address these issues.

An Ancient Woolly Mammoth Left a Diary in Her Tusk:

Scientists study minerals on mammoth tusks to understand the ancient animals' lives. A 14,000-year-old female woolly mammoth named Elma had her biography written by analyzing chemicals in her tusk, revealing her movements from birthplace to final resting spot. This technique could help answer questions about how these mammals survived for hundreds of thousands of years and what led to their eventual extinction at the end of the Ice Age.

Ditching PaaS: Why I Went Back to Self-Hosting:

An individual who had previously been uninterested in devops/server-admin work has shifted from using PaaS (Platform as a Service) offerings to self-hosting their projects on VPS. After years of using PaaS, they found its affordability appealing initially but began experiencing issues like increased cost for infrequently used services, lack of flexibility and limited compute power compared to the price. They then turned towards self-hosting, which has become easier due to new tools like Docker, Caddy, GitHub Actions, and better reliability with cloud platforms like Cloudflare. Despite a single point of failure in their current setup, they found self-hosting to be more appealing for those who are still at the hacker stage or exploring multiple ideas on one machine, although comfort with server administration is required.

Cells Across the Body Talk to Each Other About Aging:

1993 saw a groundbreaking discovery that aging is not an entirely random process. Instead, specific genes play a crucial role in regulating it across various species, from animals to humans. A recent study delved deeper into the molecular mechanisms behind aging. It discovered a new biochemical pathway that involves signals passed between mitochondria, the cellular powerhouses responsible for generating energy. Damage to these organelles led to their repair response being amplified in worms, extending their lifespan by 50%. This process relies on communication between cells and has implications on fertility concerns related to aging. The findings suggest that mitochondria function as cellular walkie-talkies sending messages throughout the body and have a vital role in regulating

lifespans.

Hans Reiser (architect of ReiserFS V3 + Reiser4):

The main sentiment in this text is remorse and regret. The author reflects on their past decisions and actions, especially related to the filesystem Reiser4, acknowledging mistakes, failures, and how they could have handled situations better. They apologize for not being a good leader or communicator and express wishing that they had the opportunity to correct these shortcomings before causing harm to others. The author also wishes well-being for the people involved in their project, particularly those who suffered the consequences of his actions. In conclusion, the letter seems like a genuine attempt at self-improvement and redemption.

Ergaster - Escaping surveillance capitalism, at scale:

The relationship between users and technology has evolved significantly in recent years. Services based on apps and companion software have emerged as an alternative to the earlier model of using software installed locally on computers. However, some organizations collect and sell user data for profit, a practice known as surveillance capitalism. To combat this issue, self-hosting and paid subscriptions are popular methods that claim to protect users' privacy, but they may not completely safeguard their information. In addition to technology solutions like encryption, regulation, justice, and education play crucial roles in preventing the collection of user data by businesses.

Surprise plant cell discovery unlocks human anti-aging potential:

A newly discovered protein within a little-studied cell structure, the Golgi apparatus, holds great promise for preserving cell longevity and may play an essential role in the aging process. The study conducted by scientists at the University of California Riverside found that when plants lacking this protein were exposed to stressors such as poor light, they wilted and yellowed much faster than control plants. Reinstating the production of the protein led to the reversal of these signs of premature aging. While more research is needed, understanding the impact on human cells could lead to targeted therapies that bolster cell health and possibly slow aging or age-related diseases.

Queues Don't Fix Overload:

The article discusses the misuse of queues as they relate to system overload. When apps experience slow operations due to increased load, it's common to introduce queues to speed things up again. However, when these queues reach their limit, data is lost, leading to a new failure point. A better solution would involve identifying the bottleneck in the system and implementing proper back-pressure or load-shedding mechanisms. This ensures that your system doesn't become too slow or lose essential data as it scales, providing better quality of service for customers.

I am dying of squamous cell carcinoma, and the treatments that might save me are just

out of reach:

A patient with squamous cell carcinoma shares their personal journey of dealing with cancer and highlights the challenges in accessing promising mRNA vaccines due to delays from the FDA (Food and Drug Administration). The author, who faces a short time left to live, emphasizes the need for a stronger „right to try" presumption and faster approval process to help save lives. They encourage others to consider supporting efforts for cancer care, such as Go Fund Me or donating to clinical trials.

You Don't Need Health Insurance:

This article discusses the affordability of American healthcare without insurance. The author argues that many everyday health services like dental checkups, eye exams, or even emergency room visits can be accomplished with cash payments, often at cheaper rates than those covered by insurance plans. Negotiation plays a role in keeping costs down, as hospitals and clinics sometimes overcharge for services. In some situations, insurance can make sense, such as if you are diagnosed with chronic illnesses, or for pregnant women planning home births with specific insurance plans that cover these procedures. The overall takeaway is that navigating healthcare can be challenging and complex regardless of whether one has health insurance or not, but taking an active role in understanding and negotiating costs could lead to more affordable care.

NIH-Syndrom - Innovation Wiki - aumentoo GmbH:

Das „Not-Invented-Here"-Syndrom beschreibt eine Aversion gegenüber Ideen und Innovationen, die extern an ein Unternehmen oder Personen herangebracht werden. Durch Ignoranz, Eitelkeit und Konkurrenzverhalten sind betroffene Unternehmen oftmals nicht aufgeschlossen für andere Ideen und entwickeln so häufig nicht optimal. Dieser Zustand verlangsamt das Innovationsprozess und führt zu mangelnden wirtschaftlichen Erfolgen, da die Betreiber ihrerseits auch den gesamten Startup-Prozess beeinträchtigen können. Trotzdem gibt es Vorteile wie der Anspruch eines Unternehmens auf eigene Originalprodukte und das Verhindern von Plagiat. Zusammenarbeit in unterschiedlichen Abteilungen oder mit externen Einrichtungen ermöglicht ein besseres Teamwork, effizientere Prozesse und bessere Entscheidungsfindung.

GitHub - collabora/WhisperSpeech: An Open Source text-to-speech system built by inverting Whisper.:

WhisperSpeech is an open-source text-to-speech system built by inverting Whisper. The goal is to create a powerful and easily customizable model, similar to Stable Diffusion but for speech. Currently, the models are trained on English LibreLight dataset and will target multiple languages in future releases. Users can test the synthesized voices using Colab or by downloading them from HuggingFace. The project also provides presentations, architecture details, and resources related to WhisperSpeech development.

Ask HN: What's the best car without undesirable features?:

The user asked for recommendations on cars without undesirable features such as internet connectivity, remote anti-theft, subscription services, or touchscreens. They also mentioned their preferences include all-wheel drive, at least 30mpg fuel economy, and a range of over 250 miles for electric vehicles. Some suggestions included used cars like Toyota Camry, Honda Accord, Nissan Altima, Buicks from the early 1990s or older models with manual controls. They should consider repair costs and availability of parts when choosing a car.

A Million Ways to Die on the Web:

This article provides an overview of various reasons behind why websites shut down and users lose their content. The mentioned causes include abandonment, competition taking over, financial issues, company acquisitions, changes in ownership, personal issues, censorship, continuous deletions, and associated data deletion. It emphasizes the importance of making backups to protect user data.

Understanding Flash Attention - Fueling Large language Models:

This article discusses the importance and functionality of Flash Attention, a method used in many large language models (LLMs) like OpenAI's GPT or Falcon 40B, Llama 2. It explains how Flash Attention reduces computation time from quadratic to linear by implementing various techniques, making it memory-efficient and faster compared to standard Transformer attention. The article also highlights the recent introduction of Flash Attention 2.0, which focuses on better parallelism, work partitioning, and support for head dimensions up to 256.

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llama : revisit using flash attention for prompt processing (a.k.a. prefil) + GPU implementation · Issue #3365 · ggerganov/llama.cpp:

Summary of github issue: This issue is related to revisiting the use of Flash Attention for prompt processing (a.k.a prefil) and implementing it on GPUs. The discussion includes information about different versions of Flash Attention, potential improvements in performance, and possible solutions or implementations. There are also concerns regarding memory usage during these processes.

Bakterien produzieren Chemikalien aus CO_2 – mit Turbo:

Wissenschaftler haben einen wichtigen Fortschritt im Bereich der synthetischen Kohlendioxid-Fixierung in Mikroben erzielt. Darmbakterien aus der Gattung Escherichia coli können, wenn ihre Stoffwechselprozesse umprogrammiert werden, industrietaugliche Chemikalien aus CO2 produzieren und dies sogar mit einem besonders hohen Wirkungsgrad. Diese neuen Prozesse könnten in Zukunft zur Herstellung von Treib- oder Kunststoffen beitragen, was sowohl im Industrie- als auch im Klimaschutzbereich große Möglichkeiten bietet.

Coming to Grips With Apple's Seemingly Unshakable Sense of Entitlement to Its Commissions From Third-Party iOS Apps:

The recent court-established right of developers to inform their US customers about lower prices on web sales has resulted in a new issue, as Apple has introduced a 27% tax on web purchases for developers who use third-party payment processors like PayPal or Stripe. The tax is applied when users purchase items through apps from the iOS platform after tapping external links within a seven-day window of the initial tap. Critics argue that the move by Apple contradicts its commitment to offering fair competition in digital markets, while some believe that the tech giant's compliance with anti-steering rules may be considered illegal or unethical.

How monopolists drive the world's power and wealth divide:

The report discusses the increasing dominance of billionaire monopolists in various sectors such as Big Tech, Big Pharma, and food giants. It highlights how these individuals and their companies have built positions of market and strategic dominance, leading to extreme wealth for themselves while harming consumers, workers, smaller businesses, and society at large. The article also delves into the sources of billionaire wealth, including monopoly power, and explores the system that supports this power. It concludes by advocating for ways to end the billionaire takeover for the public good, such as breaking up dominant firms, treating some companies as public utilities, revising trade agreements, and restricting corporate monopolies' lobbying influence.

How much memory do long context LLMs need for inference? - r/LocalLLaMA:

A user experienced issues with a finetuned NousResearch/Yarn-Mistral-7b-128k model using LoRA. They encountered an OutOfMemoryError while loading the model in 4-bit mode and prompting it with a long input, despite having a powerful GPU. The user found it surprising that their high-end GPU couldn't handle the task efficiently due to quadratic scaling of attention. The individual seeks guidance on how to resolve this issue for efficient handling of large contexts.

Methods and tools for efficient training on a single GPU:

1. What is the purpose of gradient accumulation in optimizing training? Gradient accumulation aims to increase the effective batch size beyond the limits imposed by the available GPU memory. This optimization technique involves iteratively calculating gradients for smaller batches, rather than computing them for an entire batch at once. By saving the gradients and combining them at specific intervals (e.g., after a certain number of forward/backward passes or every epoch), you can achieve better utilization of available resources without sacrificing performance. Gradient accumulation is particularly useful when training large models on limited memory systems.

2. What does mixed precision training do? Mixed precision training improves computational efficiency by using lower-precision numerical formats for certain variables. Instead of processing all data with the standard 32-bit floating point (fp32) format, it uses less precise values like 16-bit float (fp16), bfloat16, or even custom precision levels, depending on the hardware and data type. This method can speed up computations without compromising accuracy significantly if used in conjunction with careful memory management techniques.

3. Why is combining multiple optimizations beneficial? Combining different optimization techniques can lead to more significant improvements in both training performance and overall resource

efficiency. By leveraging the strengths of each approach, you can tailor your model's training process to suit a wide range of hardware constraints and task specifications. This enables the creation of scalable machine learning models that cater to various computational environments while ensuring high accuracy and speed.

Get Out of Jail Cards, 2 - Marginal REVOLUTION:

The NYC police union reportedly issues „courtesy cards" to friends and family members that provide special treatment if they are pulled over by a cop. These cards come in different levels of privilege, gold, silver, and bronze, allowing the holders to receive more lenient treatment. Enforcement officers have the option to either ignore the card and let the driver go with a warning or choose to issue a ticket or make an arrest despite the card's presence. A New York Times article discusses a traffic cop who resisted letting speeders go when presented these cards, leading to consequences within the police department.

What happens when a school bans smartphones? A complete transformation:

In an experiment at Buxton boarding school, students have been using simple „dumb" phones with limited functionality to help combat smartphone addiction. The Light Phone allows for basic communication features and comes without modern apps or a camera. The decision to ban smartphones has led to fewer interruptions during class, more meaningful interactions around campus, and less screen time. While the school's head, Peter Beck, left at the end of summer, he praised the year-long change as transformative for the institution. This approach is one of many schools addressing the issue of smartphone usage in education, with some countries banning them completely in schools.

Quebec man who blamed wildfires on government pleads guilty to setting 14 fires | CBC News:

A Quebec man named Brian Par pleaded guilty to starting a series of intentional wildfires that forced hundreds of people from their homes. Par, who had posted conspiracy theories about forest fires being set deliberately by the government, admitted guilt to 13 counts of arson and one count with disregard for human life. His actions led to evacuations in the small community of Chapais, affecting around 500 homes. Par was detained since his arrest, and a pre-sentencing report will assess his mental state and public safety risk.

Before "I Do" - What Do Premarital Experiences Have to Do with Marital Quality Among Today's Young Adults?:

This article summarizes a collection of studies related to various aspects of marriages, cohabitation, commitment, premarital education, and their effects on relationships and outcomes. It highlights the roles played by intrapersonal, interpersonal, and contextual factors in engaging in or responding to extramarital involvements, and investigates the effectiveness of marriage and relationship education programs on communication skills. Additionally, it discusses the impact of premarital cohabitation on

marital stability, quality, commitment processes, and decision-making surrounding engagement and cohabitation. Furthermore, it examines the transition from partnership to parenthood and its implications for family trajectories, while considering the timing of cohabitation and engagement's influence on first and second marriages. The studies also analyze the association between premarital cohabitation and marital dissolution, as well as the importance of commitment functions in securing romantic attachment. Lastly, it discusses the effects of multiple partner maternity versus paternity on family trajectories, and the development and validation of a brief version of the Dyadic Adjustment Scale (DAS).

Planetary boundaries:

The article discusses an update on the planetary boundaries concept, which outlines nine processes that regulate the stability and resilience of Earth's ecosystem. Recently, a team of scientists quantified all nine processes for the first time. They concluded that six of these boundaries have been transgressed, increasing risks to people and ecosystems. The planetary boundaries concept has gained significant interest within science, policy, and practice since its inception in 2009, with updates helping to refine understanding and guide human development on a changing Earth.

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the rust project has a burnout problem:

This article discusses the high burnout rate among contributors in the Rust Project, with a focus on individual experiences. The author emphasizes how a sense of personal responsibility and a belief that one must do everything personally can lead to burnout. They suggest treating Rust contributions like a job, prioritizing self-care, and fostering a healthy environment within the project to prevent burnout. Additionally, they propose examining the project's organizational, cultural, and resource issues to address these concerns further.

The 'dark earth' revealing the Amazon's secrets:

A lost city discovered in the Amazon rainforest is just one example of a wider mystery surrounding „Amazonian dark earth", an ancient fertile soil created by indigenous communities which still exists today and can teach modern society about sustainable farming practices. These layers of charcoal-black soil, which can be up to 3.8m thick, contain valuable nutrients for growing crops such as nitrogen, potassium, and phosphorus. It has been suggested that these soils were intentionally created by ancient indigenous peoples, with the aim of improving land fertility and allowing them to farm more effectively in the rainforest. In addition to their role in creating this rich soil, Amazonian dark earth (ADE) also acts as a powerful carbon sink, containing up to 7.5 times more carbon than surrounding soils. Businesses such as Carbon Gold are now looking to harness this ancient technique by producing biochar, a form of charcoal made from organic material at high temperatures, which can be used as an environmentally-friendly planting aid and help combat climate change.

I regret selling my startup:

Selling a company can be an emotional journey involving various factors beyond just the financial

aspect. This article reflects on the experiences of selling a successful bootstrap business and its impact on the individual's sense of self and purpose. The author emphasizes the importance of understanding one's personal values, seeking guidance through therapy or mentorship, considering alternatives to selling the entire company, and hiring a reliable team for support during the sale process. While it is not recommended that everyone sell their business, the article encourages founders to deeply consider their reasons and expectations before making such a life-changing decision.

Python Packaging, One Year Later: A Look Back at 2023 in Python Packag:

A year ago, an article discussed the troubled state of Python packaging with numerous tools, vague standards, and complicated virtual environments. Now, reflecting on recent developments, it examines whether progress has been made in this field by discussing possible improvements or regressions since then.

Who are western Europeans? New study reveals true origins:

A recent study on Europe's Neolithization process highlights the role genetics played in shaping European societies and agriculture. The research, which analyzes the genomes of nearly 1,600 ancient people from the Mesolithic and Neolithic eras, revealed an invisible „boundary" stretching from the Black Sea to the Baltic Sea dividing eastern hunter-gatherers from western farmers during the Neolithic transition. The study also discovered that early European farmers had a genetic predisposition for multiple sclerosis, potentially due to an advantageous genetic variant that emerged among Yamnaya nomads who brought horses into Europe 5,000 years ago. These findings suggest the significance of genetics and environmental factors in human development and evolution.

Standard Contracts - Common Paper:

The article highlights the success of Common Paper standard agreements, downloaded over 15,000 times and involved in numerous multimillion-dollar transactions. Developed by a team of expert lawyers, these agreements are accessible for free under Creative Commons CC BY 4.0 License.

Fefes Blog:

Es gibt eine literarische Technik in Filmen und Fernsehserien, bei der ein Charakter aufmerksam macht, dass etwas im Plot oder im Drehbuch ungewöhnlich oder inkonsistent ist, wie zum Beispiel „das ist ja merkwürdig, eigentlich sollte das doch nicht sein…". Dieses Konzept wird auch als Lampshade Hanging bezeichnet und war bereits von Shakespeare verwendet worden. Diese Technik lässt sich immer häufiger in PR-Ausführungen beobachten. Google hat kürzlich angekündigt, dass sie Spielanwendungen für Glücksspiele in ihren Store akzeptieren werden: „Wir freuen uns, dass diese neue Ansatzmethode neue Geschäftsmöglichkeiten für Entwickler weltweit bietet und die Nutzer-Sicherheit fortsetzt", schrieb Karan Gambhir, Google's Direktor von globaler Vertrauensbildungspartnerschaft. Dieses Beispiel zeigt einige Widersprüchlichkeiten in der Begründung: Wenn es hier nur um die Nutzer-Sicherheit ginge, würden sie keine Spielanwendungen

zulassen.

10+ Useful JavaScript Timeline Library 2024:

Javascript timeline libraries are essential tools for creating visually appealing and chronologically organized information in web apps and pages. Some popular open-source JavaScript Timeline Libraries include Timesheet.js, Labella.js, react-Chrono, Vertical Timeline, Vis Timeline, TimelineJS3, React Calendar Timeline, React Vertical Timeline, TimelineJS, Chronoline.js, and angular-timeline. Choose a timeline library based on your specific project requirements to create interactive and easy-to-understand timelines for your events or information.

Overview – SPDX:

SPDX, an open source project under the Linux Foundation, aims to provide clarity about software licenses. Collaborating with various organizations, it has sub-groups focused on tech, legal, and outreach aspects of this initiative. Monthly progress calls are held and participation is welcome via their Participate page. The project encompasses the SPDX Specification, License List (including exceptions), tools, and libraries for managing documents and licenses.

Using the Dependency submission API - GitHub Docs:

The Dependency submission API enables users to submit dependencies for projects, such as those resolved when a project is built or compiled. By using this API, the dependencies get included in GitHub's dependency graph feature and can receive Dependabot alerts and security updates for known vulnerabilities. Dependencies will be featured in dependency review or organization's dependency insights. Users can submit snapshots containing dependencies, which are sets of dependencies associated with a commit SHA and other metadata, to represent the current state of their repository. GitHub provides actions like Go Dependency Submission, Gradle Build Action, Maven Dependency Tree Dependency Submission, Mill Dependency Submission, Scala Sbt Dependency Submission, and more to assist in submitting dependencies for various ecosystems. Alternatively, users can create their own custom actions for dependency submission or use GitHub Actions like SBOM-generator-action, Anchore SBOM Action, sbom-tool by Microsoft, SPDX Dependency Submission Action, Anchore SBOM Action, and more to generate and submit software bill of materials (SBOMs).

OmniBOR:

OmniBOR is a minimalistic scheme aimed at simplifying software artifact dependency management by creating compact Artifact Dependency Graphs (ADG) and embedding unique identifiers into the artifacts during build time. The solution consistently constructs verifiable ADGs across languages, environments, and packaging formats without requiring developer involvement or awareness. OmniBOR complements existing supply chain management tools such as SBOMs while enabling automatic resolution of software artifacts and vulnerability detection in run-time. It works by correlating every piece of software with a comprehensive ADG of all its „ingredients." By leveraging the version control system git, OmniBOR offers potential improvements to software identification and

vulnerability management.

Does language mirror the mind? An intellectual history | Aeon Essays:

This article discusses the history of linguistic relativity, also known as the Sapir-Whorf hypothesis, and its development over time. It examines the views on language, thought, and culture from various thinkers such as Herder, Humboldt, Boas, and Sapir, among others. The article highlights how their ideas have influenced different fields of study including linguistics, anthropology, and psychology. While there has been a shift in academic focus away from the more metaphysical aspects of language, the importance of understanding its impact on thought and culture remains relevant.

Future gigantic solar farms might impact solar power elsewhere in the world:

Discussions around potential environmental impacts of covering large portions of our planet with solar panels are important for us to consider as we move towards more renewable energy solutions. Some potential effects include changes in weather patterns, albedo (the reflection of sunlight), and the heat island effect. It's crucial that these aspects are studied further so that we can develop better strategies for sustainable energy production and minimize unintended consequences on our planet.

Future gigantic solar farms might impact how much solar power can be generated elsewhere in the world:

A study has found that building massive solar farms can impact global weather and climate, leading to changes in cloud cover and consequently affecting solar power generation elsewhere. Researchers simulated giant solar farms covering 20% of the Sahara using a computer program. These large-scale projects could influence solar energy resources, creating complex dependencies and geopolitical maneuvering among nations. Collaboration and fair distribution of solar power are essential for sustainable development to avoid unintended risks to global solar power generation.

How to Fix Overscan in Windows to Fit the Screen:

This article discusses potential solutions for overscanning or overscaling issues on Windows computers, where displays extend beyond visible areas or cut off content. Suggested fixes include disconnecting and reconnecting display cables, adjusting display resolution, changing display scale settings, using the graphics control panel, tweaking monitor display settings, running hardware troubleshooters, updating display drivers, and installing Windows updates.

Toot by emollick:

The toot discusses how much R&D spending comes from tech giants such as Amazon, Alphabet, and PepsiCo compared to other countries' governmental budgets and companies' investments in research and development. Ethan Mollick highlights that these large corporations are significantly contributing

more money than other entities like France or Nigeria. Additionally, the tweet implies a potential future conflict between cola brands, with Pepsi seemingly prepared to win due to their R&D spending capacity.

Documentaries - watch free online documentaries:

89:30 also discusses Vianet Djenguet's invitation to film wildlife cameraman. The invitation is for closely documenting the effort to protect the eastern lowland gorillas from extinction in the Democratic Republic of the Congo. This part highlights his role in this critical conservation mission.

Why new hires often get paid more than existing employees - bloomberry:

A short summary of this article describes various reasons for companies to underpay employees relative to peers and new hires, despite the potential negative impact on employee retention. These factors include: 1. Companies may want certain workers to leave if they're not meeting expectations or are paid too much compared to their performance. 2. Salary increases often have strict caps due to budget limits, resulting in underpayment relative to market average salaries. 3. HR teams lack awareness of the long-term implications of hiring new employees at higher salaries. 4. Employers may overvalue experience gained outside the company and overlook those who have been with them for longer. 5. Retaining employees is a difficult problem that not many people want to address, leading to inertia in addressing underpayment issues.

To deal with this situation as an employee, it's recommended to gather information on your company's compensation philosophy and discuss the issue openly with your manager. Additionally, obtaining market salary data and demonstrating your impact on the company may help facilitate a conversation about raising your compensation.

Many AI Safety Orgs Have Tried to Criminalize Currently-Existing Open-Source AI:

The article discusses how several AI safety organizations have advocated for bans on open source AI models in the past, leading some users to believe these groups do not wish to ban current open-sourced models. However, numerous proposals and policies from various groups would have effectively banned already existing open-source AI systems with certain parameters, like large amounts of computation used during training or high performance on benchmarks. Organizations such as the Center for AI Safety, Palisade Research, The Future Society, and others, all have policy documents that imply a potential ban of open source models within specific ranges of FLOPs or MMLU scores, ultimately restricting their use or even criminalizing the act of making weights generally available.

Arbeit und Einkommen mit Elterngeld:

Beim Ermitteln des Mutterschafts- oder Vaterschaftsgeldes wird es anhand der Einkommensverhältnisse unterschieden, ob eine Person selbständig (Selbstständige) oder nicht selbständig (Nicht-Selbstständige) ist und ob sie neben ihrer nicht selbständigen Tätigkeit einen

selbständigen Nebenerwerb hat. Das Einkommen vor der Geburt einer Person wird in einem festgelegten Zeitraum bestimmt, was davon abhängt, ob man selbständig oder nicht-selbständig ist. Für Selbständige gilt ein anderen Zeitraum als für Nicht-Selbständige. Selbständigkeit besteht, wenn innerhalb eines bestimmten Zeitraums Einkommen aus einer selbstständigen Tätigkeit erwirtschaftet wurde. Zu den nicht-selbständigen Personen gehören Angestellte, Arbeitnehmer und Beamte sowie Auszubildende. Die Berechnung des Mutterschafts- bzw. Vaterschaftsgeldes wird anhand des Nettoeinkommens vor der Geburt vorgenommen, nachdem Steuern und soziale Abgaben abgezogen wurden. Das berechnete Elterngeld-Netto kann sich von dem tatsächlichen Nettoeinkommen unterscheiden, das auf einer Gehaltsbescheinigung angegeben ist. Für Einkommensverhältnisse, die beide selbstständige und nicht-selbständige Tätigkeiten umfassen, spricht man von mischten Einkünften. In diesen Fällen werden im Elterngeld entsprechend behandelt.

Scrum sucks.:

A short summary of the article is that although Scrum is an effective Agile project management system, its implementation in various real-life scenarios might not be as efficient as it should be. It highlights several issues with Scrum and suggests ways to improve team dynamics and workflow by making the process more agile, flexible, adaptable, collaborative, focused on individuals and interactions, and centered around results rather than metrics. The article encourages embracing change over sticking to a predefined plan, emphasizing transparency in feedback, and trusting the team with autonomy and responsibility for their work.

Do venture capitalists want forever war?:

Venture capital investment in defense start-ups has significantly increased, with US-based VC investments nearly doubling from $16 billion in 2019 to over $17 billion in the first five months of 2023. Prominent defense venture capital firms like Founders Fund, Andreessen Horowitz, and Lux Capital are gaining influence, while defense-focused VCs have also become major Washington influencers. The rise of these companies is linked to global conflicts, with their success dependent on tensions and conflict-related contracts. This has raised concerns about the possible consequences of new technologies and weapons in military settings.

Linux-Kernel Archive: Heads up - effectively offline for now:

Linus Torvalds, creator of Linux kernel, informs that due to a winter storm causing power and internet outages in Oregon, the merge window is paused. Around 100k people are affected by the lack of electricity, and it is unclear how long the situation will last.

The incredible shrinking podcast industry | Semafor:

Apple's recent changes in reporting podcast listening numbers have sent shockwaves through the industry. The tech giant has tightened its rules on automatic downloads, leading to significant declines in listener numbers for popular shows. Long-running and frequently published podcasts were particularly affected. Apple defends these moves as beneficial for users and advertisers, but the

impact is causing concerns within the industry and raising questions about how the shift will affect revenue and talent deals. Some podcasters are attempting to mitigate this by diversifying their platforms and focusing on direct connections with fans.

Download a Windows virtual machine - Windows app development:

This article discusses building Windows applications using virtual machines that include the latest developer tools, software development kits (SDKs), and samples. The virtual machine supports four different options for virtualization software - VMWare, Hyper-V (Gen2), VirtualBox, and Parallels. It includes an evaluation version of Windows that expires on February 13, 2024. The package contains Windows 11 Enterprise, Visual Studio Community Edition with various workloads enabled, Windows Subsystem for Linux 2 with Ubuntu installed, Windows Terminal, developer mode, and file hashes for the virtual machines. Requirements include a minimum of 8GB RAM and at least 70GB of disk space. The VM images have no fixed user password, although some software may need one. They are not intended for long-term use or activation with a product key. There is currently no ARM version available, and rendering issues might occur on VirtualBox.

World's five richest men double their money as poorest get poorer:

The world's top five richest men have significantly increased their wealth since 2020, reaching a combined total of $869 billion. Simultaneously, the poorest 60% of the global population has lost money. This increasing disparity between rich and poor is likely to continue, potentially leading to the first trillionaire within the next decade. The report by Oxfam highlights that seven out of ten largest corporations have a billionaire CEO or main shareholder while living standards for millions of workers remain stagnant. To address this issue, the report calls for wealth taxes on businesses and individuals to redistribute resources more equally.

Plastic Waste in the Fuel Tank?:

Dutch designer Gijs Schalkx has converted an abandoned Volvo 240 to run on diesel fuel made from plastic waste, which serves as an alternative fuel supply and independent of the fossil fuel infrastructure. He collects plastic waste and converts it into fuel using a de-refinery process, heating it in a boiler to evaporate the plastic into liquid diesel. The vehicle's fuel efficiency is approximately 7 kilometers per kilogram of plastic used for driving at a speed of 80 km/h, but it takes several garbage bags full of plastic waste to produce one liter of fuel. While there are environmental concerns regarding carbon emissions and air pollution associated with burning plastic waste, Schalkx's car helps internalize these issues rather than externalizing them like traditional cars and incinerators that focus on low-emission zones. The unconventional approach of using plastic waste as a fuel source highlights potential solutions to disruptions in gasoline or electricity supplies during a hypothetical Third World War.

YouTube is loading slower for users with ad blockers yet again:

Google continues its ongoing fight against ad-blockers, causing problems for YouTube users with

these tools enabled. This new year has witnessed more delays and issues experienced by users with active ad blockers on their browsers. YouTube has experimented with slowdowns and even disabling video players for viewers using ad blockers. The main recourse suggested is to disable the ad-blocker or switch to a paid YouTube Premium subscription, which offers an ad-free experience. Some speculate this could be a deliberate tactic by Google to discourage ad-blocking software.

We are doomed:

The article discusses the challenges of modern graphics APIs and how their complexity affects software development. It highlights a pessimistic view of modern software engineering due to various factors including exclusive platform-specific APIs, poor documentation, and bloatware. The author emphasizes on the impact of this complexity on the productivity of software developers and expresses dissatisfaction with the state of software tools, libraries, and platforms. This issue is further exacerbated in situations like porting games and game engines across platforms. The article concludes by questioning whether containerization can offer a solution to platform incompatibility issues, although it still remains within the context of software development complexities.

Ask HN: What would be the single piece of advice you'd give a non-programmer?:

The article suggests that to improve at technology application, one should focus on understanding logic behind problems and breaking them down into smallest elements. This allows expression in flow charts or state charts. Automation tools like Zapier can be leveraged for automating tasks such as PDF editing. Learning programming languages, coding, or learning basics of unix shell can help in handling text and data. Excel is a functional programming environment that can handle many-step problems. To learn excel, one should break down tasks into individual steps. It's important to learn how to use technology for the purpose intended and be intentional about it rather than trying to do everything at once. Non-programmers have developed their own processes which are often overlooked by programmers. Programming is a process of understanding logic, but there are non-linear ways to solve problems that might not fit traditional programming methods. For better efficiency in using technology, learn keyboard shortcuts, automation, and clear communication for different audiences. Focus on learning basics like Unix shell, Excel, or Regex rather than spending time finding the best program for a specific task. Lastly, start thinking about how data moves in applications to understand their working better.

Slashing Data Transfer Costs in AWS by 99%:

Accidentally spending too much money on Amazon Web Services (AWS) can happen through careless data transfer, leading to substantial costs. AWS charges for egress fees (data leaving the service), ingress fees (data entering the service), and cross-region data transfers. To reduce these expenses, an alternative method is using S3 (Simple Storage Service). When uploading data to S3 from one Amazon EC2 instance in a given region and downloading it from another, both actions are free; however, storage costs do apply for this data within S3. This approach can lead to near-free cross-AZ data transfer and greater flexibility by scaling to thousands of instances while maintaining the same transfer time. The key is to optimize data usage in S3, such as deleting stored content once transferred. Understanding AWS pricing details, such as transfer and storage costs, helps mitigate

unnecessary expenses and maximize efficiency for businesses.

Why are cars designed to be capable of going much faster than the speed limit?:

The article discusses the question of why cars are designed for higher speeds than speed limits allow and mentions that suggesting it's for the Autobahn is not a complete explanation. Readers were invited to share their thoughts on this topic, with an intention for selected responses to be published later.

Amdahl's law:

Amdahl's law is a formula used to predict the theoretical speedup in latency of the execution of a task under fixed workload when resources are improved. It explains that as a program's parallel processing improves, there will always be a limit on how fast it can run due to the portion of the program that cannot benefit from these improvements. Amdahl's law states that overall performance improvement is limited by the serial part of the program and applies only when workload remains fixed.

Mehlkäfer:

Mehlkfer (Tenebrio molitor) sind eine Art aus der Familie der Schwarzkfer (Tenebrionidae). Sie bewohnen vor allem Mulm, verrottendes Holz und Vogelnester. Diese Insektenart kann als Futterinsekt für Terrarientiere oder Vögel verwendet werden und gilt auch in einigen Ländern wie den Niederlanden und Belgien seit Ende 2017 als Lebensmittel. Mehlkfer lassen sich unter anderem aus ihrer Larve herstellen, welche als Snack oder als Teil von verarbeiteten Produkten wie Protein- oder Nudelprodukten gereicht werden kann. Als Nahrung für die Larven dienen vor allem Strkehaltige Stoffe, darunter auch andere Insekten. Die Nährwerte hängen vom Entwicklungsstand der Kfer ab, was dazu führen könnte, dass die Nahrwerte sehr stark variieren können. Allerdings ist Mehlwrmer als Lebensmittel als sicher anzusehen, es kann aber zu allergischen Reaktionen führen, besonders bei Menschen mit Hausstaubmilbenallergie oder einer Allergie gegen Krustentiere wie Garnelen. Mehlkfer sind in vielen Teilen der Welt als Nahrungsmittel verwendet und können einen nachhaltigeren Lebensmittelsystem beitragen, da sie weniger Ressourcen benötigen als viele Fleischsorten.

llama.cpp CPU optimization - r/LocalLLaMA:

The article expresses concerns regarding the resource usage of llama.cpp, a project related to machine learning. It explains how it consumes high CPU power even when waiting for IO operations. Tests on a 32-thread/16-core CPU showed that using less threads improved performance. The author seeks insights into why this happens and if optimization is possible.

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