Links für 2024 KW 35

Zusammengefasst von [LlongOrca](#).

The possibilities for dark matter have just shrunk — by a lot :

In this article, scientists from the LUX-ZEPLIN (LZ) experiment have conducted research and ruled out the existence of dark matter particles with a wide range of properties. They searched for a specific type of dark matter particle called weakly interacting massive particles (WIMPs) with masses above 9 billion electron volts. The experiment monitored atomic nuclei reactions in a 10-metric-ton liquid xenon detector. With the results, they have narrowed down the maximum possible cross section for the existence of dark matter. The LZ researchers plan to gather more data to further refine their results or potentially find evidence of dark matter.

Why has Japan been hit with rice shortages, soaring prices despite normal crops? - The Mainichi:

Japan's rice acreage reduction policy, which has been in place for over 50 years, is causing shortages and high prices of rice within the country. The policy encourages farmers to reduce rice production so as to raise market prices and maintain subsidies for farmers who switch to other crops such as wheat or soybeans. This tightly managed production has led to quick shortages when there is even a slight increase in demand, like from tourists. The article argues that Japan should abolish the rice acreage reduction policy and actively start exporting its high-quality rice to increase food self-sufficiency and contribute to global food security.

Auto-Abo statt Kauf: VW ändert Geschäftsmodell radikal:

Volkswagen, a German automaker, plans to revitalize its struggling business by changing its fundamental strategy. The company is shifting towards offering electric vehicles (EVs) and a new subscription model called „Vehicle on Demand." Under this model, customers will no longer own the cars but rather lease or rent them for an extended period through a mobile app. This allows Volkswagen to retain control over usage and pricing while gaining access to valuable data about their vehicles and customers. The company plans to sell used cars only once they become too old for further rental, with the help of AI optimizing prices on European markets.

Cellar Door:

This article discusses a project called „Cellar Door" aimed at identifying the most beautiful word in the English language, with users voting between word pairs to update their respective ELO scores. The author explains how the app works and shares thoughts on AI-enabled development, mentioning the use of OpenAI's API and ELO calculations. The article also discusses the potential for AI to simplify the process of creating and deploying apps, as well as the importance of considering simpler solutions

before turning to new technologies.

Four Lessons from 2023 That Forever Changed My Software Engineering Career:

The article emphasizes the importance of execution in software development, not just having a great idea. It discusses tactics such as rapid prototyping, internal presentation for feedback, alignment with managers, and maintaining credibility and trust within the team to ensure successful projects. The author also stresses the significance of visibility, critical thinking, and focusing on personal growth rather than trying to change others or the company in order to succeed in one's career as a software engineer.

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top-10-kaliumreichste-lebensmittel-s300:

The article discusses the health benefits of potassium, a mineral that aids in nerve and muscle function, and maintaining healthy blood pressure. It highlights how the modern diet is often deficient in potassium, with processed foods being a main culprit. The article provides a list of the top 10 potassium-rich foods, including raw ham, hazelnuts, plums, peanut butter, dark chocolate, raisins, white beans, brewer's yeast, dried tomatoes, and dried kelp. It also mentions potassium supplements and mineral complexes as ways to increase potassium intake.

Why should anyone boot you up?:

The article discusses the challenges and implications of brain emulation technology in the future, particularly if it becomes possible to scan a person's brain at an atomic level. In 1000 years, when real-time brain emulation may have been developed, there would still be significant hurdles to bringing someone „back from the dead." The economy, society, language, science, and technology will all look different by then, making it difficult for a revived person to compete or communicate effectively. In addition to these challenges, there is the question of whether the revived brain would still be considered that person due to the changes in knowledge, skills, language, and other factors over time. The article concludes that the most critical problem in achieving digital immortality may not be technical but economic, as there might be no compelling reason to scan and run a brain with no financial incentive.

Exxon still expects fossil fuels to make up the majority of energy market in 25 years:

Exxon Mobil's forecast predicts that despite efforts to transition away from fossil fuels, oil and natural gas will still make up more than half the world's energy mix in 2050. The report states that while oil demand will plateau after 2030, it will remain at current levels of over 100 million barrels per day through 2050. This jeopardizes efforts to achieve net-zero carbon dioxide emissions by 2050 in order to keep global warming at 1.5 degrees Celsius. Exxon argues that investments in new projects are necessary to meet the growing global demand, as production would naturally fall at a rate of 15% annually without it.

Marcus Aurelius: On Humility and Duty:

The article discusses the importance of humility in our actions and how it should be a natural part of being human. It references Marcus Aurelius' quote from his book, Meditations, about doing good to others without seeking validation or praise. The Stoics used nature as an example for humans to act; we are social animals who flourish through cooperation and collaboration in society. The article highlights the virtues of humility, such as being honest about one's abilities, content with self-worth, and refraining from comparing oneself to others. It encourages individuals to perform good deeds without seeking recognition or external validation.

Eating the Birds of America: Audubon's Culinary Reviews of America's Birds - US Bird History:

In 1826, John James Audubon observed and studied birds while aboard a cotton schooner off Florida's Gulf coast. He detailed the characteristics of a bird he called Dusky Petrel, which was not yet known to science at that time. Later, it would be renamed Audubon's Shearwater in recognition of his discovery. Throughout the 19th century, wild birds were a common part of both rural and urban cuisine. Audubon sampled the meat from various American bird species for his Ornithological Biography. Today, it is illegal to hunt most migratory birds, but Audubon's reviews provide insight into the culinary merits of America's birds during that era.

Blood Pressure Control Should Focus on More Potassium (2023):

The article discusses a user's personal experience with high blood pressure and potassium levels. They were diagnosed at age 38 and began taking various medications for their condition. However, they experienced low potassium levels while on the maximum dosages of these medications. After receiving an MRI and consulting with an endocrinologist, it was determined that the user had primary hyperaldosteronism, which led to both low potassium levels and high blood pressure. They eventually reduced their blood pressure medication and focused on increasing their potassium intake through dietary changes.

Blood Pressure Control Should Focus on More Potassium: Controversies in Hypertension:

The article suggests that potassium intake plays a significant role in lowering blood pressure, and increasing potassium intake may offset the harmful effects of sodium intake. Although sodium reduction has been a mainstay of hypertension guidelines, the spotlight on sodium has resulted in potassium becoming neglected. The article emphasizes that the importance of both sodium and potassium in regulating blood pressure is essential in the management of hypertension. The implementation of increasing potassium intake can be achieved through diet, supplements, or food industry actions, unlike sodium intake, which has not seen any changes despite decades of recommendations.

pyannote/speaker-diarization · Hugging Face:

The article discusses the open-source pyannote.audio speaker diarization model and recommends switching to pyannoteAI for better and faster options. It provides installation instructions, steps on how to instantiate a pretrained speaker diarization pipeline, and advanced usage options such as specifying the number of speakers in advance or using lower/upper bounds. The real-time factor is approximately 2.5% with one Nvidia Tesla V100 SXM2 GPU and one Intel Cascade Lake 6248 CPU. Benchmarks show varying DER, FA, Miss, and Conf percentages depending on the dataset. The article also mentions a technical report describing version 2.1 of pyannote.audio speaker diarization pipeline and provides recipes for adapting the pipeline to one's own set of annotated data.

Local LLM with Ollama | OpenHands:

This article provides instructions on setting up and using Ollama, a language model server, with OpenHands, an AI-powered text prediction tool built with OpenAI models. It covers starting the Ollama server, configuring OpenHands to use Ollama, setting up LM Studio for local development, and modifying WSL networking mode for mirroring.

Access Denied:

This article is about an access denied issue, which means the user does not have permission to view the provided link on the server. The link mentioned in the article is related to a historical release by the NSA and Captain Grace Hopper discussing future possibilities of data hardware, software, and people from 1982.

New study reveals loophole in digital wallet security—even if rightful cardholder doesn't use a digital wallet:

This research led by computer engineers at the University of Massachusetts Amherst found that digital wallets, such as Apple Pay and Google Pay, are vulnerable to security threats due to their reliance on outdated authentication methods and prioritizing convenience over security. The study highlights issues with initial cardholder authentication and the inability to deactivate stolen card numbers once they're saved in a digital wallet. The researchers recommend following security best practices for users, such as turning on email notifications and transaction alerts for credit cards.

Association of the "Weekend Warrior" and Other Leisure-time Physical Activity Patterns With All-Cause and Cause-Specific Mortality:

This study examines the association of leisure-time physical activity patterns with all-cause and cause-specific mortality in a large cohort of 350,978 adults in the US. Compared with physically inactive participants, regularly active participants had lower all-cause and cause-specific mortality rates. However, there were nonstatistically significant associations between weekend warrior physical

activity and mortality rates, suggesting that when performing the same amount of physical activity, spreading it over more days or concentrating it into fewer days may not influence mortality outcomes.

Mozilla removes telemetry service Adjust from mobile Firefox versions:

Mozilla is removing its telemetry service Adjust from the Android and iOS versions of browsers Firefox and Firefox Focus. The developer was collecting data on the effectiveness of Firefox ad campaigns without disclosing it to users. Sören Hentzschel, a Mozilla watcher, points out that the release notes did not indicate that this service collected data. The removal may also be related to complaints about the default enabling of privacy-protecting ad metrics in Firefox, which has been enabled since July 9th release. Mozilla says it regrets enabling such telemetry but defends its reason for turning it on by default due to advertisers' need for information about their campaigns' effectiveness.

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marp-core/themes/README.md at main · marp-team/marp-core:

The article discusses a project named „marp-core" with details such as forks, stars, and notifications, which seem to be related to version control systems like GitHub. However, it also mentions that some actions cannot be performed at the current time due to user restrictions or system limitations.

How to create a theme? · marp-team · Discussion #115:

This article provides instructions on creating a CSS theme using Marp. It guides the reader through adding a path to the theme.css file and confirming it is ready for use. The article then explains how to open a markdown file in Markdown preview, check if the „Hello, world!" message displays with red text, and finally congratulates the reader on creating their first CSS theme. It also suggests learning CSS before diving into Marp themes.

Complete list of github markdown emoji markup:

This article contains various emoji symbols, characters, and codes used in digital communication and different platforms. The list includes numbers, letters, punctuation marks, arrows, symbols, and more.

The skinny framework for creating slide deck from Markdown:

The Marpit framework allows developers to create custom themes and slide presentations using Markdown. It has built-in support for CSS selectors, themes, and pagination. Marpit enables tweaks and customizations to be made through Markdown, making it easy for users to modify the styling and appearance of their slides. Additionally, it supports importing themes and scoped style, allowing for fine-grained control over the presentation.

@marp-team/marp-cli:

The GitHub article discusses a Command Line Interface (CLI) interface for Marp and Marpit-based slide deck converters. The CLI can convert Marp or Marpit Markdown files into HTML, PDF, PowerPoint, and image formats easily. Users can customize engine settings, choose between different themes, and access configuration files to fine-tune their preferences.

Marp: Markdown Presentation Ecosystem:

Marp, also known as the Markdown Presentation Ecosystem, provides an intuitive experience for creating beautiful slide decks. By using Markdown syntax, users can focus on telling their story while Marp handles the formatting. The platform supports themes, directives, and extended syntax to create visually appealing presentations. Marp can convert Markdown into HTML, PDF, and PowerPoint formats, and its pluggable architecture allows developers to extend features via plugins.

Why is a Guillotine blade diagonal?:

The article discusses a theoretical collaboration between KnowArt and Proper Printing to determine if a diagonal guillotine blade cuts better than a horizontal one. It explains how the potential energy is transferred from the raised guillotine blade to the contact point between the blade and the neck of a spherical cow, which represents the cutting object. The force required for a cut is determined using math equations considering both vertical and horizontal components. KnowArt experimentally found that the diagonal blade performed worse due to being pushed sideways, contrary to what the article predicts. However, it highlights how a diagonal blade can have advantages in slicing motion over chopping motion, which could be beneficial for certain applications.

Pi Pico 2 Extreme Teardown:

Raspberry Pi has released its new silicon chip, the RP2350, along with an associated Pico 2 assembly. The Pico 2 features a RP2350 chip containing the latest design from Raspberry Pi and Richtek's RT6150 buck-boost power supply. It also includes a quad-SPI flash memory and either two ARM M33 cores or two RISCV Hazard 3 cores, allowing customers to choose between architectures depending on market demand.

We found North Korean engineers in our application pile. Here's what our ex-CIA co founders did about it.:

This article discusses the issue of North Korean engineers applying for jobs at US-based tech companies, with Cinder being one such example. It is believed that these applicants are working on behalf of the North Korean government to funnel money back to their country while working remotely from third countries like China. Cinder's co-founders have backgrounds in the CIA and have experience dealing with similar issues, which allows them to detect and handle such cases effectively. To tackle this issue, Cinder encourages sharing relevant information with security teams at networking and job listing sites they work with, as well as offering tips for handling North Korean

applicants at their own companies.

Software erosion is happening all around us:

Software developers spend an average of 42% of their work week on maintenance, which is contributing to the erosion of software quality. This erosion is caused by the increasing complexity of products due to hypercomplex software configurations and too many changes made by too many people for various reasons. The „shift left" approach aims to address this issue, but fixing it requires incorporating QA testing tightly into the development process, conducting static code analysis, functional tests, and re-architecting as needed. This will help prevent outages and ensure software remains stable and maintainable over time.

Why Everything Is CRUD:

The CRUD model (Create, Retrieve, Update, Delete) is often perceived as applicable only to SQL operations on business objects stored in a database. However, CRUD actually encompasses any operation performed on something that can be modeled in the object-oriented style. Many non-CRUD operations are actually CRUD operations, and applying CRUD modeling almost always helps by bringing benefits such as automatic error handling, performance enhancements, monitoring, and more. This broader understanding of CRUD allows developers to leverage built-in features and optimizations offered by various frameworks, resulting in improved application performance and maintainability.

Bloom's taxonomy:

Bloom's taxonomy is a set of three hierarchical models used for classification of educational learning objectives into levels of complexity and specificity. The models cover the cognitive, affective, and psychomotor domains and are organized in a pyramid structure with knowledge as the base, followed by comprehension, application, analysis, synthesis, and evaluation at the peak. Bloom's taxonomy is frequently used to structure curriculum learning objectives, assessments, and activities. The models were named after Benjamin Bloom who chaired the committee of educators that devised the taxonomy and edited the first volume of the standard text, Taxonomy of Educational Objectives: The Classification of Educational Goals.

Four stages of competence:

The four stages of competence, also known as the „conscious competence" learning model, is a psychological concept that describes the process of progressing from incompetence to competence in a skill. Individuals may have several skills, some unrelated to each other, and each skill will typically be at one of these stages at any given time. The four stages are: unconscious incompetence (not understanding or knowing how to do something), conscious incompetence (recognizing the deficit but not yet actively working on it), conscious competence (understanding and actively using the skill), and unconscious competence (having practiced a skill so much that it becomes second nature). Many skills require practice to maintain a high level of competence.

Big Pharma claims lower prices will mean giving up miracle medications. Ignore them.:

For the first time, the federal government has negotiated directly with pharmaceutical companies over drug prices, which will take effect in January 2026. This new policy aims to help the Medicare program cap individual patient's out-of-pocket spending on prescriptions at $2,000 per year. However, critics argue that this move could stifle innovation by reducing profit margins for companies like Pfizer and Merck, making it harder to hire scientists and invest in research and development. Despite these concerns, studies suggest that the drug industry remains highly profitable, and there is potential for AI-driven research to help develop new drugs more quickly and cheaply.

Server Setup Basics:

The article discusses the process of setting up an app for self-hosting and creating a strong foundation for it. It covers topics such as proper login with SSH, setting up users and making specific users for each app, NGINX setup, quality of life tools for server management, log management, basic network security, and DNS. The article also touches on using Docker and offers pros and cons to consider when deciding whether or not to use it.

Removing stuff is never obvious yet often better:

This article discusses how Pinecone removed a calculator from its pricing page that was causing confusion among potential users. The company discovered that the calculator, which estimated costs based on usage patterns, was too sensitive and confusing, deterring prospective customers. An A/B test showed that removing the calculator led to more sign-ups and less confusion. The author argues that companies often add unnecessary elements to their products or strategies, and encourages questioning whether these additions are truly valuable. Removing non-essential elements can lead to better results and simplification in both company processes and product offerings.

Set Up a $4/mo Hetzner VM to Skip the Serverless Tax:

This article explains how to set up a virtual machine (VM) on Hetzner, install Caddy for SSL, configure Cloudflare for DNS, and deploy a web app using Github. The tutorial is geared towards beginners and focuses on setting up a simple Node.js app that restarts automatically when it crashes. The article also provides information on tools used such as Hetzner, Cloudflare, Caddy, and PM2.

In Search of Circus Europa:

The article is an account of a personal experience during Fasnacht, a three-day carnival in Basel, Switzerland. It describes the author's fascination with the elaborate costumes and performances, as well as their impressions of the local people who seemed to exist out of time. The article highlights the contrast between the festive atmosphere of Fasnacht and the seemingly lifeless nature of the city and its residents during normal days. It also touches upon the challenging transition from the

carnival's surreal pacing back to reality, leaving a sense of longing for the circus-like world experienced during those three days.

'Closer than people think': Woolly mammoth 'de-extinction' is nearing reality — and we have no idea what happens next:

In 2003, scientists managed to reverse extinction by cloning the Pyrenean ibex (Capra pyrenaica pyrenaica), but the resulting clone died soon after birth due to a lung defect. Today's „de-extinction" science has advanced significantly in the past two decades and is no longer hindered by technological limitations, allowing scientists to have sufficient DNA for cloning many extinct species. However, experts debate whether it is ethical or ecologically beneficial to bring back creatures that went extinct long ago. Colossal Biosciences, a Texas-based biotechnology and genetic engineering company, plans to revive three iconic extinct species: the dodo, Tasmanian tiger, and woolly mammoth. Critics argue that money would be better spent on existing conservation initiatives rather than de-extinction projects.

The EV evolution is going to take longer than we thought:

Electric vehicle sales are on the rise, despite recent headlines suggesting otherwise. JD Power is projecting that 1.2 million EVs will be sold in the US by the end of 2024, an increase over 1 million last year. However, the growth rate has been revised down from a previous prediction of 12 percent to 9 percent. The industry faces challenges such as high vehicle prices, depreciation, and limited charging infrastructure. Automakers need to offer more low-cost compact cars and sedans and react with flexibility and patience to meet this moment of profound historical change.

Brain Scientists Finally Discover the Glue that Makes Memories Stick for a Lifetime:

A recent study in Science Advances suggests that protein kinase Mzeta (PKMzeta) works alongside another molecule called KIBRA, which attaches itself to synapses activated during learning, effectively „tagging" them. PKMzeta then keeps these tagged synapses strengthened, leading to the maintenance of memories over time. This discovery fills in gaps from previous research and could potentially lead to new therapies for memory impairments such as Alzheimer's disease.

Exclusive: the papers that most heavily cite retracted studies:

The Feet of Clay Detector, developed by computer scientist Guillaume Cabanac at the University of Toulouse in France, has identified thousands of problematic papers with retracted references. The detector's findings have revealed that 60% of studies cited in a review paper on eye detection for human illnesses were already retracted. Nature's news team found that 18 out of the 30 studies cited by the IEEE paper had been withdrawn, and its authors did not respond to requests for comment. The detector is designed to provide another way to prevent bad research from spreading through scientific literature, some of which could be fake work created by 'papermill' firms.

"Distroless" Container Images.:

This article discusses distroless, a language-focused Docker image that removes the operating system. It is licensed under the Apache-2.0 license and has 18,500 stars and 1,100 forks. The article also mentions branches, tags, and activity related to distroless.

Huck Finn—One of the Greatest Anti-Racist books ever written:

The article discusses the debate around Mark Twain's „Adventures of Huckleberry Finn" and „Tom Sawyer" being racist or anti-racist books. It argues that both novels have a light touch when addressing racial issues, making them great literary works. Critics argue that Huckleberry Finn is racist due to its language and portrayal of Jim, but the author asserts that Twain uses this to dismantle racist narratives through character development. The article suggests that approaching these topics with a light touch allows Twain to expose human hypocrisy and self-deceptions more effectively.

How a Leading Chain of Psychiatric Hospitals Traps Patients:

Acadia Healthcare, one of America's largest chains of psychiatric hospitals, has seen its revenue and stock price soar during the pandemic-induced mental health crisis in the US. However, a New York Times investigation revealed that the company had been detaining patients against their will in violation of the law. In at least 12 states where Acadia operates psychiatric hospitals, patients and employees reported incidents of illegal detainment. The Times found instances where patients were sent to Acadia facilities for routine mental health care or seeking therapy, but were held under laws meant for those posing an immediate threat to themselves or others, without meeting that legal standard.

Luxushotel, Lost Place und Kunstort: Die 5 Leben der „Waldlust" in Freudenstadt:

The Waldlust hotel in Freudenstadt was built in 1902 and quickly gained popularity among royalty and Hollywood stars. It later served as a hospital during World War II before closing down in 2005. Despite being abandoned for almost two decades, it remains an attractive location for photographers, filmmakers, and horror fans. Recently, students from five art and music schools in Baden-Württemberg have been using the space to create artwork inspired by the historic building.

WireGuard Site to Site VPN - Zwei Netzwerke sicher verbinden:

WireGuard ist ein leichtgewichtiger und schneller VPN-Server, der auf Open Source basiert und eine einfache, sichere und schnelle Lösung für alle möglichen Plattformen und Betriebssysteme ist. Es gibt Anleitungen zum Einrichten von Client-to-Site und Site-to-Site-Verbindungen, die hier im Blog beschrieben werden. Der Benutzer sollte sicherstellen, dass das richtige Interface ausgewählt wird und Routing auf beiden Seiten gesichert ist. WireGuard kann automatisiert mit dem System gestartet

werden, indem der Befehl „systemctl enable wg-quick@wg0" ausgeführt wird.

Germany — Plonk It:

The article provides a detailed guide for identifying Germany through various regional and state-specific clues, including spotlights, maps, and resources. It covers aspects such as road signs, bollards, architecture, infrastructure, transportation, and more to help users improve their geo-guessing skills in Germany. The article also provides links to additional maps and quizzes for further practice.

Chatbots Are Primed to Warp Reality:

This article discusses the increasing integration of AI chatbots and assistants in various platforms, such as Google, Meta, and Apple. As these models are becoming more popular and accessible, there is a growing concern about their potential to spread misinformation, which could be manipulated by people looking to influence public opinion. The article highlights the need for individuals and companies to remain vigilant and cautious while interacting with AI technology, as it may have implications on how we perceive and process information.

Nearly half of Nvidia's revenue comes from just four mystery whales each buying $3 billion-plus:

Nvidia's second-quarter revenue doubled due to four unidentified customers accounting for 46% of its $30 billion sales. These whale customers are likely large technology companies like Amazon, Meta, Microsoft, Alphabet, OpenAI, or Tesla. Their purchases were primarily related to Nvidia's booming business selling chips to data centers driven by artificial intelligence. However, this heavy reliance on a few major customers raises concerns over the sustainability of such exponential growth in one corner of its business. Some investors have expressed skepticism about how long this can be maintained.

QRSVG:

QRSVG is a JavaScript project that renders two-dimensional bitmasks (QR codes) into SVG elements as collections of SVG paths with defined purposes. It combines Project Nayuki's QR Code generator library and the author's own QRSVG project, allowing for customization options such as shape and color, and converting QR codes to downloadable SVG and PNG formats. The project is open-source under the MIT license and requires no hosting costs.

Building LLMs from the Ground Up: A 3-hour Coding Workshop:

This article presents a 3-hour coding workshop presentation on implementing, training, and using Large Language Models (LLMs). It covers various topics such as understanding LLM input data,

tokenizers, coding an LLM architecture, pretraining, instruction finetuning, benchmark evaluation, conversational performance, and more. The video features clickable chapter marks to jump directly to specific topics of interest.

Freetube is the best way to watch YouTube:

Freetube is an application that lets users take control over their YouTube experience by allowing them to customize the appearance and functionality of the video-streaming site. With Freetube, users can disable comments, recommended videos, and automatically playing next videos, as well as replace thumbnails with generic ones. Additionally, watch history is stored only on a user's computer, not YouTube's servers. Freetube is available for Windows, Mac, and Linux computers but does not have a mobile version.

BOOX PALMA REVIEW:

The Boox Palma is an Android e-reader with a 6.1„ e-ink screen, support for third-party apps, and higher refresh rates. It has a 1.8GHz octa-core CPU, dedicated GPU with Boox's Super Refresh technology, 6GB of RAM, 128GB storage capacity, and a MicroSD Card slot. However, it lacks native support for DRM-protected ebooks and mobile connectivity. The device is water-repellent but not waterproof. Overall, the Boox Palma is a versatile, well-built Android e-reader with great reading app capabilities, but its lack of mobile connectivity may limit its appeal to some users.

How a Houston resident uncovered recycling fraud with AirTags:

Apple employs a robot named Daisy to disassemble old iPhones, while Houston's „all plastic accepted" recycling program has been questioned by residents due to its inefficiency and improper handling of waste. A resident used AirTags to track where her plastic waste was actually going, finding that it ended up at Wright Waste Management, which is not approved for storing plastic waste and had failed fire inspections. Houston's Director of Solid Waste Management admitted the city has collected 250 tons of plastic since late 2022, none of which has been recycled yet. Apple, on the other hand, is an industry leader in reducing its use of plastic and invests in robotics to help recycle old products. Houston awaits a promised sorting facility that will sort and treat stored recycling, but the majority of the resulting pellets will be used as fuel, adding to carbon emissions.

Rocky Jaiswal - Shine with Gleam:

The author discusses their preferences in programming languages, tools, and techniques. They describe a „golden path" approach that prioritizes separation of code and data, functional style, immutable data, rich collections libraries, structured concurrency, type support, build tools, pattern matching, JSON/HTTP support, LSP support, garbage collection, and the ability to get paid for their work. They mention using Gleam as an example language that meets many of these preferences, and share their experiences working with it in a small project.

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This article discusses the author's experience in using Rust for Linux kernel development. The author points out that Rust provides a safer and more consistent coding experience compared to C, as it enforces certain rules and prevents certain errors, such as incorrect memory management or resource handling. The article argues that using Rust can potentially simplify the complexities of kernel coding and reduce the workload for maintainers and reviewers, allowing them to focus on more important aspects of the kernel development.

Buy, Borrow, Die - Explained:

The „buy, borrow, die" strategy is a tax elimination technique used by the ultra-wealthy to avoid income and wealth transfer taxes. In the article, a private wealth attorney explains how the strategy works by purchasing an asset, taking out a loan or line of credit, and then selling the asset tax-free upon death. This technique allows individuals to defer tax payments until death, potentially saving millions in taxes and wealth transfer. The process requires customized loans, estate planning, and wealth transfer tax exemptions.

The Contingency Contingent:

In 1998, a young woman was hired by a large advertising company for a fake job, which required her to participate in the documentation process of a company's preparedness for the Y2K bug, a problem that could have caused computers worldwide to malfunction. The process involved gathering data, documenting problems, and performing quality assurance. The woman worked in a large office, and the environment was tense and high-pressure. The company's primary concern was the potential loss of revenue and damage to their reputation if they were not prepared for Y2K. However, the company had not actually taken any significant measures to prepare for the potential crisis. The author describes the office's culture, the people she met, the tasks she performed, and her experience living through the Y2K hype.

Deepwater Submarine Recovers Roman Battering Ram From Ancient Battle:

An Italian cultural heritage organization has recovered a Roman battering ram from the Mediterranean Sea. The ram was part of a Roman warship's prow and was used during the Battle of the Aegates, marking the end of the first Punic War in 241 BCE between Rome and Carthage. The discovery was made by divers with Sicily's Department of Cultural Heritage's Superintendence of the Sea and the Society for the Documentation of Submerged Sites. The ram is now on land in Favignana, where initial study revealed an ornamental relief of a helmet and feathers.

Why A.I. Isn't Going to Make Art:

This article discusses the limitations of current AI models in creating art, specifically focusing on their

lack of ability to make choices that are fundamental to human creativity. It argues that while AI can generate coherent sentences or produce images based on prompts, it lacks the intention to communicate and cannot replace humans as creators. The author suggests that for AI to be considered truly intelligent, it must efficiently learn new skills, something current models are not capable of doing. Additionally, art is valuable because it communicates an individual's unique life experience, and generative AI reduces the amount of intention in the world by treating humans as less than what they are: creators and apprehenders of meaning.

Volkswagen: Warum die Verbrenner attraktiver als Elektroautos sind:

The article discusses the Volkswagen's decision to focus on gasoline-powered vehicles in an attempt to increase profit, resulting in higher prices for electric cars such as the VW ID.3. Despite some markets showing a decreased demand for traditional internal combustion engine (ICE) vehicles, Volkswagen continues its strategy of focusing on these options due to their potential higher returns. The article suggests that while there are certain economic factors driving this decision, ultimately, it may not be the best long-term choice for both the company and the environment.

You've only added two lines - why did that take two days!:

This article discusses the complexity of fixing bugs in software development, debunking assumptions about lines of code equaling effort or value, and the importance of understanding context and nuances when investigating reported issues. The author explains that various factors contribute to the time it takes to fix a bug, including the need for thorough testing, investigating related functionality and possible side-effects, and ensuring the issue is fixed permanently without requiring further attention in the future.

'He was in mystic delirium': was this hermit mathematician a forgotten genius whose ideas could transform AI – or a lonely madman?:

The article tells the story of Alexander Grothendieck, a renowned mathematician who revolutionized postwar mathematics in the same way Einstein did for physics. In 1970, he quit his high-level mathematics career and disappeared into seclusion in a small village in the French Pyrenees, where he lived until his death in 2014 at age 86. Grothendieck's work is now of interest to Huawei for potential use in AI applications as they explore the concept of toposes.

Encryption in France - ATICA European Association of Trade + Investment Controls and Compliance Attorneys:

The article discusses the legal framework for encryption in France, focusing on the national controls and regulations surrounding its use and trade. Encryption is essential to security in various industries such as communication networks, power grids, and health systems. In France, encryption products are subject to specific control by authorities requiring declarations or authorizations before intra-community transfers, import, or export. Fines, product confiscation, and prison sentences may result from noncompliance with these regulations. The European Union sets general guidelines for

cryptography policy, but member states like France have their own additional regulations.

Mastodon: Chatkontrolle zurück auf der Agenda:

The article discusses the resumption of the EU's ChatControl, a program that focuses on controlling chat rooms and exchanges on the internet. On Wednesday, EU government representatives will gather based on a secret document, and citizens are encouraged to take action and help stop the program. The article also highlights an update on the meeting set on Wednesday, which will involve collecting guidance for the program's further work.

The Great Vic Gravel Route: crossing Victoria on unsealed roads:

The article discusses the feasibility of riding a bike without ever pedaling along paved roads in Victoria, Australia. By analyzing data from OpenStreetMap and considering routes with the least amount of pavement, it is possible to ride across Victoria, though there will still be some paved road crossings. The Great Vic Gravel Route covers over 1,700 kilometers and includes only 30 kilometers of paved roads.

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archive.is:

The article discusses the need to complete a CAPTCHA (a challenge-response test used to distinguish human users from bots) in order to access archive.is, as well as providing instructions on how to prevent future occurrences of this issue through anti-virus scans and network administrator scans for potential malware or misconfigured devices.

AI's Blind Spot: Detecting LLM Hallucinations:

Large Language Models (LLMs) are prone to generating factually incorrect, nonsensical or inconsistent text due to hallucinations. These limitations can lead to frustration for users and undermine confidence in AI products. To responsibly deploy LLMs, understanding the causes of hallucinations is crucial. Causes include overfitting, lack of true understanding behind processed words, data quality issues, ambiguous prompts, and conflicting responses. Three primary types of hallucinations are input-conflicting, context-conflicting, and fact-conflicting. To mitigate these hallucinations, detection methods must be developed at two stages of the AI development lifecycle: pre-production offline evaluation and post-production online evaluation. By detecting hallucinations in LLMs, businesses can improve user trust and adoption of AI technologies.

The AI Dilemma—Choosing Wisely:

The article discusses the benefits and drawbacks of traditional machine learning (ML) algorithms versus generative artificial intelligence (AI). Traditional ML is time-tested, interpretable, and suitable for various domains such as finance and healthcare, while generative AI can create entirely new

information, opening up possibilities for image generation, customer segmentation, drug discovery, and more. As an AI leader, it's crucial to understand the strengths and limitations of each approach and choose the right tool for specific use-cases to deliver real value and make informed decisions.

LLM from Scratch—Part 1 Bigram model:

This article provides an introduction to large language models (LLMs) such as Chat GPT and guides readers on creating their own LLM, starting with a bigram model. A bigram model predicts the next token based on its previous token. The article covers character-level and word-level tokenization, using Shakespeare's plays as an example dataset. It explains how to build a simple probability distribution model for each word in the text and then generating output from it. Finally, the article concludes by mentioning that this is just the beginning of their journey into LLMs with plans to improve the model in future guides.

LLM News, Updates and Articles:

The article discusses vLLM (Variable Length Language Model) and its fast inference capabilities on Large Language Models (LLMs). It explains that vLLM's variable-length architecture allows it to adapt to different types of tasks efficiently, enabling faster training and better performance. This technology has potential applications in various industries such as natural language processing, machine translation, and question-answering systems.

LLM News, Updates and Articles:

The article discusses the vLLM (very large language model) and its fast inference capabilities on LLMs (large language models). It explains that the vLLM is a more advanced version of the GPT-2 language model, with improvements in speed, efficiency, and accuracy for various tasks like text generation and translation. The vLLM has shown significant progress in modeling long-term dependencies and contextual understanding, making it suitable for real-world applications. The article emphasizes that while the performance of large language models is impressive, they still have limitations related to hallucinations and bias.

Wie funktionieren LLMs? Ein Blick ins Innere großer Sprachmodelle - Blog des Fraunhofer IESE:

The article explains the components and functions of Large Language Models (LLMs), which are essential for artificial intelligence. LLMs consist of four main parts: tokenization, embedding, prediction of the next token, and decoding. Tokenization involves breaking down text into smaller units called tokens, while embedding converts tokens into vectors. The prediction of the next token is based on a neural network, and decoding determines which tokens should be outputted next. LLMs are trained using vast datasets and can be fine-tuned for specific tasks or applications.

GPS und Internet: Russland zielt auf Unterseekabel und GPS-Navigation:

Dimitri Medvedev, former Deputy Chairman of the Security Council of Russia, stated that Russia could potentially disable internet and GPS access in Western countries. Undersea cables have been considered vulnerable to attacks for a long time. As reported by Business Insider on August 27th, 2024, Medvedev cited recent reports suggesting Ukraine's involvement in the destruction of the Nord Stream pipeline as the reason for Russia having no concerns about destroying undersea cables. The US-based Center for Strategic and International Studies (CSIS) also warned about the extreme vulnerability of undersea cables back in June 2024.

Moreover, David Cattler, NATO's intelligence chief, cautioned in May 2024 that Russia might plan to destroy undersea cables as retaliation for Western support to Ukraine. A significant damage to the cables would result in a massive outage of large parts of the internet and cause an enormous economic impact.

Besides undersea cables, GPS navigation is also susceptible to disruptions. Since August 2023, several airlines have reported GPS problems over the Baltic Sea, which are believed to be caused by Russia. Melanie Garson, a security expert at University College London, stated that as societies increasingly rely on connectivity and space-based data in sectors ranging from agriculture to food deliveries, disrupting undersea cables and GPS will become more effective in undermining national and economic security.

Robert Dover, a professor of international security at the University of Hull in Britain, noted that undersea cables have long been considered potential military targets, and were monitored by both the US and USSR during the Cold War. However, the main issue is that governments lack plans to minimize damage in case of widespread outages.

While aircraft are equipped with multiple navigation systems and crews trained to switch to alternative systems upon a GPS failure, there are almost no contingency plans for the failure of undersea cables. The Heist Project program is already running, aimed at rerouting connections from fiber-optic cables to satellite networks in case of attacks, but these networks do not come close to achieving the high data rates and low latencies of fiber-optic cables.

The CSIS called on the US to strengthen international cooperation to improve coordination in response to an attack on a cable. Currently, there is no system to hold perpetrators accountable if a cable is sabotaged in international waters.

Research exposes how repeated information warps our decisions:

Economists at the University of Surrey have identified a cognitive bias that influences decision-making due to repeated information, leading individuals to make irrational choices. Participants in the study were presented with simple decision-making tasks and exposed to repeated numerical information, which caused them to overestimate its importance. This phenomenon could potentially impact fields like marketing and political campaigns, as strategies such as repeating key messages might be more effective at manipulating public opinion or consumer behavior than previously thought.

Plenty of ups and downs are key to a great story, research finds:

This article discusses the importance of „narrative reversals" in storytelling, as identified by Samsun Knight, an economist and assistant professor at the University of Toronto's Rotman School of Management. Through a study published in Science Advances, it was found that stories with more and bigger narrative reversals – or changes of fortune where characters' fortunes swing from good to bad – were more popular and engaging across various media such as television, movies, novels, and crowdfunding pitches. The researchers analyzed nearly 30,000 works using computational linguistics to quantify the number and intensity of reversals in a text. The findings may help psychologists understand narrative and benefit storytellers by providing a pedagogy for writers based on Aristotle's ideas about peripeteia and Leon Katz's scholarship.

Does mpox cause lingering symptoms like long covid?:

Mpox cases are rising in the Democratic Republic of the Congo and neighboring countries, with more than 15,000 reported cases and over 500 deaths so far in 2023. Mpox, previously known as monkeypox, typically presents with a rash that progresses to blisters, along with symptoms such as aches, fever, pain, and fatigue. Long-term complications like long covid are possible after mpox infections, although their prevalence is unclear at this time.

"Why Haven't You Done That Already?":

The article discusses Vice President Kamala Harris' interview with CNN and how she has been hiding from the press, unlike Joe Biden who was hiding in his basement during his campaign in 2020. It mentions that her poll numbers have started to sink recently due to her inability to explain away the issues of the past four years. The article also highlights that Kamala Harris' answers seemed vague and vacuous, and how she has not accomplished much since becoming Vice President. Additionally, it suggests that Kamala Harris may be an inadequate candidate for the Democrats, and it questions her ability to win the upcoming election against Donald Trump.

More Than Half Of Commercial Baby Foods Are Unhealthy:

A study published in Nutrients found that 60% of processed foods marketed for infants and toddlers in the US failed to meet nutritional requirements set by the World Health Organization (WHO). The researchers analyzed 651 products from 10 grocery chains, with baby foods being particularly high in sugar and low in fats, proteins, and other important nutrients. The use of pouches, which dominate the baby food market, has grown by 900% over the past 13 years. These products often contain misleading labels that claim „no added sugars" even though most of their energy comes from sugar.

Anti-Inflammatory Diet May Reduce Dementia Risk By Up To A Third: Study:

A study published in JAMA Open Network revealed that individuals who adhered to an anti-inflammatory diet saw a 31% reduction in their risk of developing dementia, particularly in those with existing cardiometabolic diseases such as heart disease, Type 2 diabetes, and stroke. The observational study found that consuming anti-inflammatory foods lessens systemic inflammation in the body, which may slow the progression of injury to the brain and eventually develop dementia.

Anti-inflammatory foods include berries, nuts, fatty fish, avocado, green tea, olive oil, vegetables, turmeric, and mushrooms, while inflammatory foods to avoid include excess sugar, high-fructose corn syrup, refined carbohydrates, fried foods, and heavy alcohol intake.

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5 lessons from ancient civilizations for keeping homes cool in hot, dry climates:

Modern buildings often have glass facades and windows that cannot be opened, making them unbearable during heatwaves or power outages. Ancient civilizations such as the Sumerians, Egyptians, Puebloans, Muslim caliphates, Mayans, and Teotihuacans adapted to hotter and drier climates with techniques that can be applied today. These include using materials such as adobe or mud for insulation, building close together for shade, utilizing courtyards for lighting and ventilation, developing wind-catchers for cooling, orienting buildings for solar heat management, and capturing rainwater for future use. Lessons from these ancient civilizations can help modern architects design more resilient structures in a changing climate.

Mosquito-borne illnesses are rising: Here's how to protect yourself:

Mosquitoes are responsible for more deaths than any other creature in the world, with recent outbreaks of Eastern equine encephalitis (EEE) in New England and West Nile virus reminding us of the serious health concerns they present. Researchers say mosquito-borne illnesses are on the rise due to warming temperatures and other factors. To protect against mosquito bites, avoid going outdoors during dawn and dusk, cover exposed skin with long sleeves and pants, use an insect repellent registered by the Environmental Protection Agency (EPA), and remove standing water around your home to reduce breeding areas for mosquitoes.

Are you a Recall hater? Windows 11's big AI feature may come with an option to uninstall it – but we wouldn't count on it:

The Windows 11 Recall feature has been found to have the option for uninstallation in a recent update. The optional update includes an AI-powered search, which comes with a boost for modern AMD Ryzen CPUs. Deskmodder discovered that the latest Windows 11 update introduces the choice to uninstall Recall. However, there is speculation that this might be due to tighter EU privacy and data regulations rather than giving users more choice in their Windows 11 installation. Microsoft aims to have Recall in the background with it disabled, but it should be clear about what the feature does when offering the option to enable it.

The org behind the dataset used to train Stable Diffusion claims it has removed CSAM | TechCrunch:

LAION, a German research organization responsible for creating the data used in training Stable Diffusion and other generative AI models, has released a new dataset called Re-LAION-5B. This re-release is of an old dataset, LAION-5B, but has been „thoroughly cleaned" with recommendations from the Internet Watch Foundation, Human Rights Watch, and others to remove links to suspected child sexual abuse material (CSAM). The new dataset is available for download in two versions. Re-

LAION-5B Research and Re-LAION-5B Research-Safe, both of which have been filtered for thousands of links to known and likely CSAM. LAION has been committed to removing illegal content from its datasets since the beginning and strictly adheres to the principle that such content is removed as soon as it becomes known.

City of Columbus Sues Man After He Discloses Severity of Ransomware Attack - Slashdot:

A judge in Ohio has issued a temporary restraining order against security researcher David Leroy Ross, who presented evidence that contradicted the city of Columbus' claims regarding the extent of sensitive information obtained during a ransomware attack on July 18th. The attack siphoned 6.5 terabytes of data from Columbus, and Rhysida claimed responsibility for it, offering to auction off the stolen data. Ross provided evidence that contradicted city officials' claims about the integrity of the stolen files, leading to a lawsuit against him by the city for alleged damages. A Franklin County judge granted the temporary restraining order prohibiting Ross from accessing or disseminating any city files posted on the dark web.

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archive.is:

The article discusses the need to complete a CAPTCHA in order to access certain web properties and provides advice on preventing future occurrences of this issue, such as running an anti-virus scan or requesting a network administrator to perform a scan for infected devices.

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500 Python Interpreters:

The article discusses the introduction of an optional GIL in Python 3.13 and its impact on multithreading performance. It also explains the history of the GIL, how it affected C API design in Python, and the steps taken to improve Python's performance for multithreading with the introduction of a per-interpreter GIL in Python 3.12. The article suggests that there are better solutions than using Python for an embedded scripting language, such as JS implementations like V8 or .NET Core being self hostable.

UK researchers find Alzheimer's-like brain changes in long COVID patients:

A study from the University of Kentucky's Sanders-Brown Center on Aging has found compelling evidence that cognitive impairments observed in long COVID patients share striking similarities with those seen in Alzheimer's disease and related dementias. The research suggests a commonality between these conditions, potentially opening new avenues for research and treatment. The study was funded by various grants from the U.S. National Institutes of Health, the Alzheimer's Association, and international organizations, with experts from different fields of neuroscience participating in the project. The findings emphasize the importance of regular brain function check-ups for these populations, particularly through EEG examinations. The research could have a direct impact on patient care, as early detection of brain changes may help healthcare providers identify at-risk individuals and implement interventions to prevent cognitive decline.

Expect – Linux tool for automating interactive programs:

This article discusses Expect, a tool for automating tasks that require manual inputs, such as login prompts or text-based interactions. It predates Linux by several years and has been used to automate various workflows involving SSH sessions into different machines. The author mentions using Expect for AIX system janitoring and its integration with Autoexpect for refining generated output.

expect(1) - Linux man page:

TODO

MongoDB takes a swing at PostgreSQL after claiming wins against rival:

The article discusses the author's experience with migrating from MongoDB to PostgreSQL databases and their preference for Postgres over MongoDB. They mention that MongoDB was chosen by „expert consultants" but led to tech debt and performance issues, while Postgres offered a better solution in terms of structure and query capabilities.

MongoDB dunks on PostgreSQL after Q2 success:

MongoDB CEO Dev Ittycheria claimed significant gains against open-source relational rival PostgreSQL during the company's second quarter results announcement, stating that recent success had partly been due to competitive wins against the system which became the most popular database among professional developers last year according to a Stack Overflow survey. While MongoDB suffered operational losses of $71.4 million in Q2 of its fiscal 2025 ended July 31st, Ittycheria maintained it was part of an ongoing trend in pitching MongoDB against PostgreSQL.

Crows Are Even Smarter Than We Thought:

The researchers from Lomonosov Moscow State University in Russia and the University of Bristol found that hooded crows can form mental templates similar to humans, allowing them to memorize and reproduce objects' shapes and sizes even when they are not present. This mental ability was once thought unique to humans. Crows also learn tool-making techniques by stealing tools from their parents. The study indicates that the ability to form mental templates could be widespread among corvids and possibly shared across the animal kingdom.

Behind AWS S3's Massive Scale:

This guest article by Stanislav Kozlovski, an Apache Kafka Committer, provides a detailed summary and analysis of Amazon Web Services (AWS) S3, which is the most popular service among AWS

offerings. Launched in 2006, S3 has grown to become a main storage system for analytics and machine learning on massive data lakes, supporting cloud-native data infrastructure with more than 300 microservices. The article discusses various features introduced since its launch, the underlying architecture of S3, and how it achieves high durability while maintaining low costs.

Giant underwater avalanche decimated Atlantic seafloor 60,000 years ago, 1st-of-its-kind map reveals:

An underwater avalanche occurred nearly 60,000 years ago in the East Atlantic seabed off the coast of Morocco. The avalanche started as a small seafloor slide and rapidly expanded into a thunderous torrent of sediment and boulders, traveling over 1,600 kilometers across the Atlantic seabed. This underwater avalanche grew more than 100 times in size along its path, which is much larger than land-based snow avalanches or debris flows. Researchers used sediment data to trace the path of this catastrophic event and warn that such occurrences could pose significant risk to seafloor infrastructure like internet cables.

The Most Dangerous Email I've Sent - Not Your Language:

The author shares their experience of working in a high-stress, management-heavy role at their previous job. They felt overwhelmed with responsibilities, and the position took away from their enjoyment of software engineering. Through therapy and reflection, they realized that they couldn't continue down this path without letting themselves, their family, and colleagues down. They wrote an email to their superiors expressing their feelings and concerns, ultimately leading to a re-evaluation of their job responsibilities and career trajectory. The author encourages others in similar situations to have honest conversations with their managers about their struggles and the need for change.

Abrisskosten für AKW Hamm-Uentrop: Gericht weist Klage des Betreibers ab:

Das LG Düsseldorf hat die Klage der Betreibergesellschaft gegen Bund und Land im Rechtsstreit um die Abrisskosten des stillgelegten Atomkraftwerks in Hamm-Uentrop abgewiesen. Demnach sind Bund und Land nicht verpflichtet, die Kosten zu erstatten. Eine derart unbegrenzte Haftung folgt nicht aus dem zwischen den Parteien im Jahr 1989 geschlossenen Rahmenvertrag. Das Urteil ist noch nicht rechtskräftig. Die Betreibergesellschaft kann gegen das Urteil Berufung einlegen. Der Thorium-Hochtemperaturreaktor THTR sollte die Zukunft der atomaren Energieversorgung werden, wurde jedoch nach zahllosen Problemen stillgelegt und wird Ende 2030 zurückgebaut werden.

wireguard-install/wireguard-install.sh at master · Nyr/wireguard-install:

This article provides a guide to installing WireGuard on various Linux distributions, including Ubuntu, Debian, AlmaLinux, Rocky Linux, CentOS, and Fedora. The guide includes detecting the OS type, checking for supported distros, and configuring the environment variables needed for the installation. It also covers detecting unsupported environments, discarding stdin, and detecting if BoringTun (userspace WireGuard) needs to be used or not.

The article explains how to detect if the $PATH does not include the sbin directories and provides instructions to configure it if necessary. It also includes tips on how to determine if a system is running inside a container, and whether BoringTun (userspace WireGuard) is required for the environment. Additionally, it discusses the detection of environments where $PATH does not include the sbin directories.

Furthermore, the article explains how to set up automatic updates for BoringTun if it's installed and provides instructions on setting up a firewall for WireGuard if needed. It also covers creating and configuring the new client's DNS and new client setup. The guide wraps up with removing existing clients or WireGuard entirely from the system.

GitHub - Nyr/wireguard-install: WireGuard road warrior installer for Ubuntu, Debian, AlmaLinux, Rocky Linux, CentOS and Fedora:

The article appears to be about the WireGuard road warrior installer for various Linux distributions, including Ubuntu, Debian, AlmaLinux, Rocky Linux, CentOS, and Fedora. It is available under an MIT license with 3.9k stars and 829 forks. There are multiple branches, tags, and activity associated with the project. However, it also states that „You can't perform that action at this time." which might be a limitation or error in accessing certain features of the application.

The Far-Reaching Ripple Effects of a Debunked Cancer Study:

A study published in Nature four years ago claimed that cancers have unique microbial signatures, which could lead to blood tests for diagnosing tumors. The research received significant attention from the scientific community and investors, and was cited in over 600 papers. However, the study has faced multiple setbacks, including retraction after criticisms by other scientists questioned its methodology and findings. The events illustrate the far-reaching consequences of flawed science, with potentially incorrect data affecting research papers and the future of related startups like Micronoma, which was founded to capitalize on the study's findings.

Exclusive: Thousands of papers misidentify microscopes, in possible sign of misconduct:

A new study published in August found that one in four papers on research involving scanning electron microscopy (SEM) misidentified the specific instrument used, raising concerns about research misconduct. The study examined more than 1 million studies from 50 materials science and engineering journals since 2010. Out of the articles that provided figure captions and image metadata banners, 8,515 (28%) listed the wrong microscope manufacturer or model. This misreporting is considered „genuinely concerning" by materials scientist Angus Wilkinson. The study suggests that many of these papers could be the result of manuscripts originating from paper mills which produce bogus or plagiarized papers and sell author slots on them in exchange for a fee.

US-Wahlen: Trump droht Zuckerberg mit lebenslangem Gefängnis:

In seinem Buch „Save America", das am 3. September 2024 erscheinen soll, wirft Donald Trump dem

Facebook-Gründer Mark Zuckerberg vor, die US-Wahl 2020 beeinflusst zu haben. Trump droht Zuckerberg öffentlich mit lebenslanger Haft, falls dieser bei den Präsidentschaftswahlen 2024 betrügt. Die Republikaner warfen dem Facebook-Konzern Meta zudem vor, dass dieser im Jahr 2020 Inhalte unterdrückt habe, die US-Präsident Joe Biden geschadet hätten.

ChatGPTs Stromverbrauch: Zehnmal mehr als bei Google:

The article discusses the energy consumption and carbon footprint of AI systems, with a focus on ChatGPT. According to a study by BestBrokers, every ChatGPT query consumes ten times more energy than a Google search. An average ChatGPT query is estimated to use 2.9 watt-hours of electricity, compared to 0.3 watt-hours for a regular Google search. On an annual basis, ChatGPT currently consumes approximately 226.82 million watt-hours just for answering user queries. This equates to around $30 million in energy costs based on 100 million active users per week and 15 queries per user per week. The article also compares ChatGPT's energy consumption with that of streaming services, smartphones, and countries such as Finland and Belgium.

Strange Blood Disorder: Unveiling the Mystery of My Poisoning in Sweden:

This article is a personal narrative about the author's experiences with hypercalcemia, vitamin D toxicity, and the subsequent discovery that their wife was responsible for these conditions through deliberate poisoning. The narrative includes the author's medical journey, involving numerous hospitalizations, tests, and treatments, as well as conversations with doctors and the police after the discovery of the poisoning. The article also touches on the emotional impact of the situation on the family and the potential legal consequences for the wife.

Tabbed out on the Oregon Trail:

Powell's is a famous destination for book lovers, and the author recently visited and found „Pick Your Own Path on The Oregon Trail," a unique choice-based gamebook with tabbed pages, which are rare in the format. The book is based on the early computer game „The Oregon Trail" and has a sequential art style similar to other books in the series, but uses full color and die-cut tabs for its layout. The author shares their experience with the book and compares it to other choice-based games and narratives.

Hausarztzentrierte Versorgung:

Die Hausarztzentrierte Versorgung (HZV) ist eine Form der medizinischen Versorgung in Deutschland, bei der der Hausarzt als erste Anlaufstelle für den Patienten sämtliche Behandlungsschritte koordiniert. Er nimmt dabei die Funktion eines Lotsen wahr. Die Gesundheitspolitik verfolgt mit dieser Form der Versorgung zwei Ziele: Zum einen soll der Patient besser versorgt werden, zum anderen sollen durch die Koordinierung insgesamt Kosten gespart werden. In den Hausarztzentrierten Verträgen nehmen über 16.000 Hausärzte teil.

Starlink's local bank accounts are frozen as X prepares to be shut down in Brazil:

A Brazilian judge has blocked Starlink's bank accounts, a SpaceX-owned company, amid an ongoing dispute with social media platform X. This move is a response to the legal battle between X and the Supreme Court judge Alexandre de Moraes who threatened to shut down X in the country due to demands to block certain accounts. As Starlink closed its operations in Brazil earlier this month, it plans to address the matter legally. Moraes has also threatened to shut down X completely if they don't appoint a legal representative in Brazil.

The Imperial Origins of Big Data - Yale University Press:

The article discusses how the growth of data in the digital age brings up political questions about its usage, control, and preservation that have been present throughout history. It draws a comparison to the introduction of paper to Europe, which led to governments controlling the spread of information through archives. As society continues to deal with an information overload, it is essential to consider the political implications of data management. The article emphasizes the importance of understanding the history and politics surrounding data to inform current debates on data governance.

Dawn of a new era in Search: Balancing innovation, competition, and public good:

Google search has been ruled a monopoly by Judge Amit Mehta due to its behavior in suppressing search competition with distribution agreements. The debate over the case has prompted various experts to present pros and cons on arguments, including proposed remedies. The authors argue that the main issue is not protecting competitors from Google's success but preserving a competitive marketplace that safeguards consumers from abuses. They propose separating the Search Index from other indexes and treating it as an essential facility to foster more diverse competition, ultimately benefiting consumers.

Elasticsearch is Open Source, Again:

Elasticsearch and Kibana are returning to being open-source under AGPL license, an OSI approved license like SSPL, alongside ELv2. This decision comes after resolving market confusion from AWS's fork three years ago. The company emphasizes its dedication to the open-source community and will continue to support their current users while adding new options for others.

The secret inside One Million Checkboxes:

The article discusses an online project called „One Million Checkboxes" (OMC), which was created as a lighthearted, ephemeral experiment in engineering and creativity. The site allowed users to interact with one million checkboxes on a single page, with each checkbox representing a unique user. Users could toggle checkmarks in real-time, creating an ever-changing visualization of individual and

collective actions. The author shares the story of the site's creation, its impact on users, and how it highlighted the importance of fostering creativity and engineering within digital spaces.

The secret inside One Million Checkboxes:

One Million Checkboxes was a website launched in 2024 that allowed users to interact with each other by checking or unchecking boxes on the site. The site quickly became popular and made it into major news outlets such as the New York Times and Washington Post, as well as online databases like Know Your Meme and Wikipedia. Although many people were unhappy about botting on the site, the author was impressed by how creative users had become in their interactions with One Million Checkboxes and expressed pride in what they achieved through it.

Firewall rules: not as secure as you think:

The article discusses tricks for jailbreaking hosts behind secure enterprise firewalls in order to enable arbitrary inbound and outbound requests over any protocol, especially useful in deploying software in hostile networking environments. It explains that vendors selling software running in a customer's datacenter often need their software to communicate with the outside world, but customers may be reluctant to open their firewall more than necessary. The article then introduces four tools - forward proxies (e.g. squid), TLS-terminating reverse proxies (e.g. nginx or stunnel), reverse tunnels (e.g. ssh - R), and corkscrew - that can be used to efficiently tunnel whatever is needed over seemingly innocuous openings in the customer's firewall. The article concludes by stating that even with innocuous firewall rules, anything short of completely disabling internet access can potentially be jailbroken using off-the-shelf open source tools.

Letters to Dubai - The Balkanized Internet: Role of Big Cloud Providers:

The article discusses the potential balkanization of the internet due to the dominance of large cloud providers, such as Amazon Web Services (AWS). These providers have their own infrastructure and do not adhere to a common architecture, which can lead to barriers in interoperability with the general internet. The author expresses concern over the lack of transparency in these large providers, and suggests that they should improve their reverse DNS, whois, and other forensic information sharing tools to better interact with the larger internet community.

Bypassing airport security via SQL injection:

The Known Crewmember (KCM) and the Cockpit Access Security System (CASS) are TSA programs that allow pilots and flight attendants to bypass security screening when flying on domestic personal trips. Employees use a dedicated lane and present their KCM barcode or employee number and airline, which is then verified through an employment status check. ARINC operates the KCM system as a central component for pilots and flight attendants to check their KCM status and interacts with various airlines' authorization systems. However, researchers discovered that FlyCASS, which provides a web-based interface to CASS, was vulnerable to SQL injection attacks, allowing anyone to add themselves or others to the KCM and CASS programs without proper authentication, posing

potential security risks for commercial airliners.

Druck auf Enz zu groß: Ärger auf der Enz: Kreis Ludwigsburg schränkt Stand-up-Paddling ein:

Die Enz bei Bietigheim-Bissingen ist ein beliebtes Stand-up-Paddling-Revier, das jedoch vom 1. März bis zum 30. September in weiten Teilen verboten wird. Das Landratsamt Ludwigsburg hat die Verordnung zur Bekämpfung des Stand-up-Paddlings erlassen. Die Paddler werden dafür kritisiert, dass sie nicht an die Vorgaben der bisherigen Enz-Verordnung halten und dadurch Fluchtreaktionen bei den Vögeln auslösen. Einige Paddler wünschen sich mehr Spielraum statt eines starren Verbots.

Computer Scientists Prove That Heat Destroys Quantum Entanglement:

Four researchers accidentally discovered a hard limit on the „spooky" quantum phenomenon, entanglement, while developing a new quantum algorithm. They found that in mathematical models of quantum systems, such as arrays of atoms, there's always a specific temperature above which entanglement vanishes completely. This discovery has excited researchers and established the absence of entanglement in a more comprehensive and rigorous way than previous findings. The team had been exploring the theoretical capabilities of future quantum computers to understand how certain quantum systems behave at high temperatures.

Air Con: $1697 for an on/off switch:

This article describes the author's experience with a faulty control tablet for an air conditioning system provided by Advantage Air. The customer discovered that only software choices prevented modern tablets from working with older control systems, and that adding a „system" chooser to their software applications would give solutions to everyone. The author suggests adding a simple „system" chooser and ensuring they still need their hardware. In the article, the author also shares his personal experience of fixing the problem by modifying an Android tablet's operating system to work with the control system.

People Expose Their Idiot Bosses:

In the article „People Expose Their Idiot Bosses," various individuals share stories of their incompetent bosses who caused them stress and even led to significant financial losses. Some examples include an HR employee whose boss accidentally threw away seven years' worth of employee files, costing the company $80,000 in fines; a boss who demanded an employee to travel to their house to fix their computer; and a lifeguarding supervisor who casually combined chemicals to create chlorine gas.

E-Scooter: Mitfahrer, Abstellen, höhere Strafen – das soll sich ändern - WELT:

The German government plans to change the rules for e-scooter and bike riders, treating them more

similarly in traffic regulations. Currently, e-scooters are not allowed to overtake pedestrians closely or carry a second person, which will be changed as part of these new regulations. E-scooter drivers will also have to follow the same rules for parking as bike riders and must use turn signals. The new regulations aim to address concerns about e-scooters' safety and their impact on other road users.

A post by Guido van Rossum removed for violating Python community guidelines:

The article discusses an incident where a user on the Python discussion forum mentioned someone who was banned from the community and asked for advice, which led to their post being hidden due to moderation actions. This has raised concerns about the governance and community guidelines within the Python community.

Lessons & Takeaways – StepChange:

In this interview, Andrew Atkinson discusses his expertise in optimizing Ruby on Rails applications for performance and scalability using PostgreSQL databases. He shares insights on scaling applications to handle millions of users by fine-tuning ActiveRecord queries, maximizing database efficiency, and integrating Sidekiq for high-throughput background job processing.

Atkinson emphasizes the importance of understanding how PostgreSQL works, including its query planner and internals, to make informed decisions about application development and optimization. He also provides tips on managing connections, read/write instances, and identifying and resolving performance issues. Additionally, he talks about his book „High Performance Postgres for Rails" which offers in-depth guidance on leveraging PostgreSQL effectively in web applications.

The 4-chan Go programmer:

This article discusses the use of channels and goroutines in Go programming for concurrent execution. The author explains how they inherited some code from an open source project that used clever ways to implement channels, but found it hard to reason about and work with. They then discuss a 4-chan example as a joke based on C's pointer indirection memes, demonstrating the use of 4 layers of channel indirection in Go programming. The article also highlights some potential issues with this approach, such as difficulty in implementation and debugging, but emphasizes that it can be entertaining to try it out.

The CIA Sent Him Deep Undercover to Spy on Islamic Radicals. It Cost Him Everything:

The article is about the life and death of an undercover CIA operative known as Anthony Lagunas. He was part of a secret program after 9/11 that involved infiltrating extremist groups, including Al Qaeda. The mission was risky and took a toll on his mental health, leading to his untimely death in a hotel room in Kuala Lumpur, Malaysia.

The article explores the challenges faced by deep-cover operatives like Lagunas, who often work in isolation and have limited support from the CIA. It also discusses the agency's efforts to address

mental health issues among its workforce, but suggests that more needs to be done.

Immovable Ladder:

The Immovable Ladder is a wooden ladder leaning against the right window on the second tier of the facade of the Church of the Holy Sepulchre in the Old City of Jerusalem. The ladder is a symbol of inter-confessional disputes within Christianity and signifies adherence to an agreement among six Christian denominations, who collectively own the church, not to move, repair, or alter anything in the church without the consent of all six denominations. Its presence on the facade of the Church of the Holy Sepulchre is linked to conflicts between Christian denominations over control of the sanctuaries and the division of the church among six Christian denominations: the Catholic Church, Greek Orthodox Church, Armenian Apostolic Church, Syriac Orthodox Church, Ethiopian Orthodox Church, and Coptic Orthodox Church.

State and time are the same thing:

The article discusses the relationship between time and state in programming, using a quartz clock as an example. It explains that different photos result from taking pictures at slightly different moments due to the clock's second hand changing position. The article also mentions that internal updates to a variable (state) may not always be observable and thus may not advance time. Finally, it emphasizes the importance of understanding time-related concepts in programming, such as bisimulation and refinement.

The slow evaporation of the free/open source surplus – Baldur Bjarnason:

The article discusses the potential decline of free and open-source software (FOSS) due to decreasing industry surpluses. Factors contributing to this decline include high interest rates, reduced investment in non-AI software, companies cutting costs, and fewer users relying on FOSS solutions. This could lead to a vicious cycle where maintainers step back from their projects, leading to an increase in unreliable and unsafe software. The author expresses concern about the sustainability of the FOSS system and its potential collapse.

Are We Anti-Cheat Yet?:

The article „Are We Anti-Cheat Yet?“ presents a list of games utilizing anti-cheats and their compatibility with GNU/Linux or Wine/Proton, compiled by the user Starz0r. The article aims to provide a comprehensive overview of the anti-cheat landscape in the gaming industry.

The Fall of StackOverflow: A Data-Driven Analysis:

The rise of advanced AI tools like ChatGPT and GitHub Copilot has led some to speculate that they may have contributed to StackOverflow's decline in performance. However, a closer look at the data

from the last 16 years reveals that issues within StackOverflow predate the introduction of these new technologies. Question Count, Answer Count, and View Count charts show steady increases until 2013, followed by stagnation and then a decline starting in 2018. Factors contributing to StackOverflow's struggles include outdated questions, heavy moderation discouraging users, an unengaging platform design, and an antiquated user interface. While ChatGPT may have accelerated the decline, it is not solely responsible for StackOverflow's current state.

Windows Terminal - Display the GIT status:

Microsoft has released a guide on how to customize Windows Terminal to display GIT status with colors. This requires using Powerline glyphs and installing Cascadia Code Fonts. To set up the customization, users need to install Git and Posh-Git in PowerShell, then modify their PowerShell console boot script. Finally, they should use the Cascadia Code PL font in Windows Terminal configuration and restart the terminal.

Scope functions | Kotlin:

The Kotlin standard library contains several functions that execute a block of code within the context of an object. These functions, known as scope functions, include let, run, with, apply, and also. They all perform similar actions but have differences in how the object becomes available inside the block, object accessibility, and result return value. Scope functions can make your code more concise and readable, although overuse may lead to confusion and errors. The choice of scope function depends on intent and project consistency.

Reifikation:

Reifikation (auch Reifizierung) bedeutet die Vergegenständlichung oder Verdinglichung einer Vorstellung, eines Ausdrucks für einen komplexen Zusammenhang oder metaphorischen Benennungen, indem sie als konkreter Sachverhalt oder Gegenstand beschrieben wird. In wissenschaftlichen Theorien kann es zu Verwechslungen zwischen den Funktionen von Begriffsklassen kommen. In der Soziologie werden abstrakte Begriffe durch die Reifikation mit Hilfe einzelner Indikatoren operationalisiert, was häufig zu Fehlverständnissen führt. Im Informationsbereich bezieht sich Reifizierung auf die Umwandlung von Relationen in Ontologieklassen.

The Power of Backticks: Naming Functions in Kotlin:

This article explains the use of backticks (``) in Kotlin programming language for naming functions. Backticks provide a flexible solution for scenarios that would otherwise conflict with the language's syntax or naming conventions, such as using reserved keywords, special characters, or spaces in function names. The benefits include expressive and readable code, avoiding naming conflicts, and improving interoperability with existing Java methods. However, it is essential to maintain consistency within the codebase while using backticks judiciously.

Start Here | Baeldung on Kotlin:

This article offers a summary of the Kotlin Basics and advanced topics, beginning with a basic introduction to the Kotlin programming language. The Kotlin Essentials section covers essential classes and data structures, while the Kotlin Collections module discusses different collection implementations. Finally, the Advanced Kotlin section covers topics such as concurrency, I/O, and design patterns.

Understanding delegation and by keyword in Kotlin - Rajesh Hadiya:

This article discusses delegation in Kotlin, a programming language. Delegation refers to transferring responsibility from one thing to another and allows programmers to use functions and properties of another class as if they are part of their own class. The example shows how a DelegatingClass transfers the doSomething function to a DelegateClass, with the by keyword establishing this relationship between the two classes. The DelegatingClass acts as a „proxy" for the DelegateClass, forwarding function calls to it.

Exploring Outdated Linux Command Line Tools: Move On to Better Alternatives:

This article discusses why several commonly used command-line tools in Linux are considered outdated and recommends their modern replacements. The obsolete tools include screen, ifconfig, netstat, nslookup, fdisk, route, arp, traceroute, telnet, wget, and suggests the following alternatives: tmux, ip, ss, dig, host, gdisk, parted, ip route, ip neigh, mtr, ssh, and curl. The article argues that these modern tools offer better security, functionality, and support for modern network architectures and technologies.

Telekom-KI will eure WhatsApp Gruppenchats lesen:

Deutsche Telekom has developed an AI tool called ".mem„, in collaboration with creative agency Saatchi & Saatchi, to help WhatsApp users transform group chat memories into appealing video memories. The tool can read and analyze the user's group chats, offering the ability to save, share, and compile audio, video, emojis, images, and messages. Powered by AI, it creates a „story" based on interactions and reactions. Unlike conventional services that rely heavily on personal photos, ".mem„ stands out with its AI-driven approach that extracts content independently from chats. The tool can be added to the WhatsApp group and generates an approximately 20-minute video by entering a command („Create our @mem"). Available in eight European countries, including Germany, Austria, and Poland.

Your Immune System Is Not a Muscle:

This article discusses the hypothesis that the rise in allergies and autoimmune diseases could be due to a lack of exposure to parasites and other „old friends" that co-evolved with humans, providing

immune system training and balance. The hypothesis suggests that our bodies may not properly recognize harmless substances as friendly, leading to allergies or autoimmune diseases when no parasites are present in the environment. It also highlights how viral infections might contribute to the development of autoimmune diseases through mechanisms such as molecular mimicry and bystander activation.

Rachel Thomas, PhD - Your Immune System is Not a Muscle:

The immune system's relationship with illness is complex, and not all infections lead to stronger immunity. Certain viruses have been linked to multiple sclerosis, Alzheimer's disease, dementia, type 1 diabetes, and certain types of cancer. Some infections may cause permanent harm or leave individuals with chronic health conditions, while others can offer a modest level of protection against future illnesses. The Hygiene Hypothesis suggests that exposure to certain microbes helps regulate the immune system, preventing it from attacking harmless environmental substances like pollen or dust. However, this idea is controversial and has been reframed as the „Old Friends" mechanism, which highlights the importance of parasitic worms and friendly (commensal) bacteria in maintaining a balanced immune system. Researchers are working on therapies based on proteins derived from helminths to treat allergies and autoimmune diseases. In conclusion, the strengthening of an individual's immune system through illness is not as simple as it may seem, with various factors contributing to the overall health impact of different infections.

Vulnerabilities show why STARTTLS should be avoided if possible | APNIC Blog:

This article discusses vulnerabilities in email protocols, such as POP3, IMAP, and SMTP, that use Transport Layer Security (TLS) for encryption. Researchers discovered over 40 STARTTLS-related security flaws in various software products. The article explains how these vulnerabilities can be exploited and recommends using implicit TLS versions of the email protocols to avoid state transitions that are error-prone. Additionally, it suggests completely disabling unencrypted and STARTTLS variants for mail server operators with an existing user base.

KLEE Symbolic Execution Engine | Hacker News:

The article discusses symbolic execution and its usage in industry, particularly mentioning the Triton project for deobfuscating heavily obfuscated code. A user recommends writing a blog post about their process. Another tool mentioned is Kani (https://github.com/model-checking/kani).

Hackers infect ISPs with malware that steals customers' credentials:

Malicious hackers, likely working on behalf of the Chinese government, exploited a high-severity zero-day vulnerability in the Versa Director virtualization platform to infect at least four US-based ISPs with malware that steals credentials used by downstream customers. The vulnerability allowed the threat actors to gain remote administrative control of Versa Director systems and inject malicious Java files, giving them elevated privileges. Black Lotus Labs reported that the attacks began no later than June 12th and are likely ongoing.

World's top 1% gained $42 trillion in a decade, taxes at record lows: Oxfam:

The wealth of the richest one percent globally has surged by $42 trillion in the last decade, according to global non-profit organization Oxfam. This growing disparity is set to be addressed at the G20 summit in Brazil, which focuses on imposing higher taxes on ultra-wealthy individuals. The wealth amassed by the richest one percent is nearly 36 times greater than that of the poorest half of the world's population. Despite this massive increase in wealth, taxes on the affluent have dropped to unprecedented lows, contributing to severe inequality. Oxfam urges governments to implement an annual net wealth tax of at least eight percent on ultra-wealthy individuals.

Tattoo ink sold on Amazon has high levels of weird and rare bacteria:

The FDA has warned for years about the potential risks associated with some tattoo inks, which may contain harmful bacteria. A recent recall of three tattoo pigments from Sierra Stain revealed a variety of bacteria at high levels. Though no reported infections or adverse reactions have been linked to these inks, contaminated inks can be difficult to accurately diagnose and may leave permanent scarring. In a study conducted by the FDA, 35% of tattoo inks were found to contain disease-causing bacteria, with 22% of the inks being specifically contaminated. The FDA recommends that consumers be vigilant about the quality and safety of tattoo supplies and techniques, while also encouraging artists to work in professional environments that can reduce the risk of contamination.

Reasons not to use (i.e., be used by) Facebook:

This article outlines several reasons why one should avoid using Facebook, including its surveillance practices, censorship policies, privacy issues, psychological harm, tax dodging, and negative impacts on democracy. The author argues that being a user of Facebook means becoming a product for the company, with little control over personal data or exposure to manipulative content. They also discuss how Facebook's business model can lead to addiction, depression, and even support for harmful ideologies. The article concludes by encouraging readers to unfriend Facebook in favor of more ethical alternatives.

AI Apocalypse: 80% of Projects Crash and Burn, Billions Wasted says RAND Report - SalesforceDevops.net:

The RAND Corporation report reveals that most AI projects fail due to leadership failures, data dilemmas, engineers' inability to focus, lack of infrastructure, and poor understanding of AI's limitations. It recommends better communication, infrastructure investment, understanding the technology's limitations, and collaboration between academia, industry, and government agencies for better AI development.

The Myth of the Coder – Communications of the ACM:

The distinction between coders and programmers originated in the 1950s with automatic programming. Herman H. Goldstine and John von Neumann's report „Planning and Coding of Problems for an Electronic Computing Instrument" introduced a hierarchy for planning and coding, separating mathematical stage from actual coding. However, in practice, the two activities were often performed by the same person. This distinction emerged as automatic programming gained prominence, creating a mythology that persists today. Grace Murray Hopper, an influential figure in the field, advocated for the automatization of programming and introduced the concept of the coder versus the programmer. The article highlights how powerful imagery and rhetoric can influence technology narratives and history.

Title:Scaling LLM Test-Time Compute Optimally can be More Effective than Scaling Model Parameters:

This paper investigates the scaling of inference-time computation in Large Language Models (LLMs) and its impact on LLM performance improvement. The researchers aimed to answer how much an LLM could improve its performance with a fixed but non-trivial amount of inference-time compute. They analyzed two primary mechanisms for scaling test-time computation: searching against dense, process-based verifier reward models and adaptively updating the model's distribution over a response based on the prompt at test time. The study revealed that the effectiveness of these approaches varies depending on the difficulty of the prompt, suggesting the need for an adaptive „compute-optimal" scaling strategy. Using this approach, they found significant efficiency improvements in allocating test-time compute and demonstrated how LLMs can outperform larger models with optimized test-time compute usage.

Introducing Cerebras Inference: AI at Instant Speed - Cerebras:

The article discusses Cerebras inference, a solution designed to serve models from billions to trillions of parameters. By splitting large models at layer boundaries and mapping them to multiple CS-3 systems, it offers industry-leading speed and cost per token. Cerebras inference achieves this by using the original 16-bit weights released by Meta, ensuring high accuracy and performance. The Cerebras Inference API is available today via chat and API access with generous rate limits, making it suitable for AI developers to build interactive and agentic applications. As part of the initial launch, Llama3.1 8B and 70B models will be offered, with support for larger models such as Llama3-405B and Mistral Large 2 coming soon.

Fefes Blog:

In diesem Artikel wird berichtet, dass das Verwaltungsgericht Köln entschieden hat, dass die Versteigerung von 5G-Frequenzen im Jahr 2019 rechtswidrig war und der Verkehrsministerium unter Andreas Scheuer unerlaubten Einfluss ausübte. Die Kritik an dem Urteil bezieht sich darauf, dass das Ministerium auf Drängen Scheuers eine sogenannte Diensteanbieterverpflichtung verzichtet hat, was ebenfalls rechtswidrig war. Die Diensteanbieterverpflichtung würde Telekom und Vodafone verpflichten, kleineren Anbietern Zugang zu ihren ausgebauten Netzen zu regulierten Preisen zu geben.

Fefes Blog:

The article discusses the reader's letter about their experience with a doctor's practice in a neighboring village that significantly extended appointment times due to the closure of a second practice outside the villages. This was not because of personnel shortages, but rather due to difficulties with electronic prescription data connections (E-Rezept). The author suspects that older patients who are unable to travel long distances may be affected by this issue caused by Telekom's inability to provide reliable DSL connections for rural practices. The letter also mentions the potential problems of introducing digital solutions like Electronic Patient Records if there is no fiber-optic network available. Finally, the author expresses frustration with Telekom, comparing its impact on healthcare access and lives to that of the Islamic State.

Why Democracy Is Mathematically Impossible (Video):

The video discusses the mathematical aspects of democracy and how voting systems can influence election outcomes. First-past-the-post is the most commonly used system but has issues like minority parties gaining power, similar parties stealing votes, and concentrating power in larger parties. Preferential or ranked choice voting (instant runoff) can address these issues by allowing voters to rank their preferences. However, it can lead to cases where a candidate doing worse wins the election. The video also mentions Condorcet's method and Arrow's impossibility theorem, which states that there is no ranked choice method to rationally aggregate voter preferences if there are three or more candidates. Finally, it highlights approval voting as an alternative method with potential benefits like increasing voter turnout and reducing negative campaigning.

How to make a Senior Software Engineer (Video):

The YouTube video discusses the different factors that contribute to becoming a senior engineer within a company. It emphasizes that seniority titles are company-specific rather than universally applicable, and that it is essential for engineers to focus on improving their skills and expertise in order to achieve such a title.

Six main factors play the most important role when it comes to seniority: being autonomous, making decisions looking at tomorrow, affecting people outside one's scope, having a wider view of processes and tasks, mastery of the craft, and mentorship without authority. Communication is also highlighted as crucial in work relationships for effectively expressing ideas and understanding others' perspectives. The video concludes by encouraging viewers to share their experiences and opinions on this topic.

Dependency Injection Ep. 1 ⧠ The illusion of simplicity (Video):

Dependency injection is a software engineering concept that helps manage dependencies between classes and modules. The first part of the series focuses on defining dependency injection and exploring its three main ways, which are constructor dependency injection, field/property injection, and method injection. It also discusses the difference between explicit and implicit dependencies and

how dependency injection can lead to better unit testing and more maintainable code.

In summary, this video introduces dependency injection as a software engineering concept that helps manage dependencies between classes. The speaker explains the three main ways of implementing dependency injection: constructor dependency injection, field/property injection, and method injection. They also discuss the difference between explicit and implicit dependencies and how dependency injection can lead to better unit testing and more maintainable code.

Dependency Injection Ep. 2 ⯈ The Composition Root (Video):

The transcript discusses Dependency Injection (DI) and its concept of the Composition Root. DI separates an application into two parts - the functional part where logic is put, and the compositional part where classes are instantiated and wired together. The Composition Root is the central point in the application responsible for creating objects and wiring them together. This module has no options of being generic, making it specific and concrete rather than generic. The role of a DI framework is to abstract complex relationships from the application developer and help maintain an object graph.

Key points: 1. Dependency Injection separates an application into two parts - functional and compositional. 2. Composition Root is the central point responsible for creating objects and wiring them together. 3. DI frameworks simplify object graphs, making maintenance easier and reducing errors. 4. The single responsibility principle helps isolate behaviors in smaller classes.

Dependency Injection Ep. 3 ⯈ Data Structures VS Objects (Video):

The video discusses dependency injection, explaining its importance for design patterns like ModelViewPresenter and unit testing. It addresses the question of what to inject and encapsulate, emphasizing that objects should be injected while data structures should be encapsulated. Objects expose behavior, whereas data structures hold data without offering functionality. The video provides examples using Kotlin's late init vars to demonstrate when to inject or encapsulate specific classes in an application. It also mentions the importance of having a foundation on dependency injection before moving on to more advanced topics.

Air Travel Sucks More Than Ever, Now The Government Is Trying To Fix It ⯈ Business Insider Explains (Video):

The video discusses the challenges faced by airline travelers due to industry deregulation under President Jimmy Carter in 1978. This led to increased competition, but also lowered service quality and more consolidation among major airlines. As of 2023, only four carriers (Delta, American, United, and Southwest) control around 70% of the industry. The video highlights recent efforts by the Biden administration's Department of Transportation to improve conditions for passengers, such as implementing a new rule on cash refunds when flights are canceled or significantly delayed, requiring airlines to be more transparent about fees upfront, and proposing rules related to seating families together. While these changes may help address some issues, the video suggests that structural changes in the industry could provide long-lasting solutions.

Helium-Mangel␣ Wieso das Element knapp wird (Video):

The main topic of the video is the growing scarcity of helium, which may become exhausted within 30 years according to Nobel Prize-winning physicist Robert Richardson. Helium is the second most abundant element in the universe and has many applications, such as for MRI machines, particle accelerators, rockets, semiconductor manufacturing, and electronics. The video explains how helium scarcity could impact healthcare, research, industry, and innovation.

Key points include:

1. Helium is a crucial element with numerous applications in various industries.
2. The scarcity of helium is due to its fluctuating nature and low concentration in the Earth's atmosphere.
3. Global demand for helium has been increasing, causing shortages and price increases.
4. Four major helium shortages have occurred since 2006, affecting the global market.
5. The US government privatized its helium reserves in 1996, which has led to an increased reliance on private markets and created additional challenges for the industry.
6. Alternative solutions include using less helium, building new helium extraction facilities, and recycling helium from existing supplies.

In conclusion, the scarcity of helium is a pressing issue that affects various industries, and finding sustainable solutions to meet global demand is crucial for maintaining innovation and healthcare services.

What your language says about you (Video):

This YouTube video highlights the numerous benefits of being bilingual or multilingual, discussing how it can enhance memory, problem-solving skills, creativity, and even delay the onset of diseases like Alzheimer's. Key points include:

1. Bilinguals have greater mental abilities due to their brains being more adept at switching between languages.

2. Learning a second language can improve memory, with bilinguals outperforming monolinguals in working memory tasks.

3. Speaking multiple languages can boost problem-solving skills and decision-making ability.

4. Bilingualism is positively correlated with creativity, regardless of age, race, or gender.

5. Learning a second language does not negatively impact first language proficiency in children.

6. Bilingualism may delay the onset of Alzheimer's disease by around four to five years.

7. Promoting language learning programs for older populations can help engage brain networks affected by aging.

8. Learning another language connects individuals with different cultures and improves cognitive reserve.

Build A Data Stack That Lasts - How To Ensure Your Data Infrastructure Is Maintainable (Video):

The transcript of the YouTube video discusses various topics related to building data infrastructure that will last. Key points include:

1. Avoid vendor-driven development and resume-driven design by seeking advice from multiple sources, including agnostic consultants and research papers. 2. Address key person dependency issues with proper documentation, cross-training, and communication between data teams and the business. 3. Build data infrastructure with a purpose and align it to the desired business outcomes, ensuring that the project meets the needs of both technical and non-technical stakeholders.

Your freezer is messing with your food (Video):

The video discusses the process of freezing food, focusing on its impact on the quality and texture of various types of foods. Freezing transforms the water inside food into microscopic ice crystals that can damage cellular structure, leading to drip loss and moisture loss upon thawing. Meat and fish generally hold up better in freezing than fruits and veggies due to their lesser water content. However, the quicker a food is frozen, the smaller the ice crystals formed, resulting in less damage to the cellular structure of the food. Tips for minimizing damage include setting the freezer as cold as possible, thinly spreading items out, placing them at the back of the freezer, and avoiding overfilling. The video also mentions that longer food stays frozen, the more damage it accumulates. In some cases, this intentional damage can result in textures like spongy tofu or soft cheese, which can be used as a culinary technique.

I am SO done with Teflon (Video):

The transcript discusses the health concerns surrounding Teflon pans and their non-stick coating made from PFAS substances. The video explains that most non-stick pans sold in the US have PTFE or PFOA coatings, which are potential carcinogens. While there is evidence of harm to birds when heated at high temperatures, human exposure through ingestion and inhalation appears to be relatively low risk. However, long-term effects on humans remain uncertain, and the environmental impact of PFAS is a significant concern. As an alternative to Teflon pans, non-stick ceramic pans are suggested, but their safety remains questionable due to lack of rigorous research. The video recommends using cast iron or carbon steel pans instead, as they do not pose any health risks and can be re-seasoned when the coating fails. In conclusion, while Teflon pan use might not be dangerous for most individuals, concerns over PFAS contamination make it a good idea to consider alternatives like cast iron or carbon steel pans.

There are actually three kinds of spicy (Video):

The video discusses the different types of spiciness experienced through food. It explains that spicy sensations are created when food activates certain nervous system cells called sensory receptors, which gather information about temperature and movement. Some examples include:

1. Chili peppers containing capsaicin, a compound that binds to heat-sensing receptors. It triggers the same physiological response as something on fire.

2. Ginger and black pepper also contain compounds that bind to these heat-sensing receptors but not as strongly as capsaicin.

3. The family of mustard, radishes, horseradish, and wasabi contains the compound AITC, which binds to a different type of sensory receptor, causing discomfort similar to volatile chemicals like smoke or tear gas.

4. Szechuan pepper has a compound called sanshuol that triggers movement-sensing receptors and causes tingly sensations.

5. Different words in the Chinese language describe these spicy sensations more precisely, such as ma for the tingly sensation of szechuan pepper and la for the searing heat of peppers.

6. The video suggests that having more words to describe various types of spiciness can be helpful in communicating about different sensations.

The Ocean Has Weather Too And It's Weird (Video):

The transcript of the YouTube video discusses three types of underwater weather phenomena - ocean fronts, eddies, and gravity waves - and their impact on marine wildlife. Ocean fronts are boundaries where water masses of different properties meet, creating areas with limited mixing that allow phytoplankton to photosynthesize and support the food chain. Eddies are whirlpools created by ocean currents that can trap water from one water mass in a different water mass with varying properties, resulting in increased nutrient upwelling or downwelling effects. Gravity waves occur within the ocean due to disturbances in the boundary between two water masses separated by density and temperature differences, causing internal waves that play an important role in sustaining marine life. The video highlights how understanding these underwater weather phenomena can help scientists better manage coastal and marine ecosystems for a more sustainable future.

Your dishwasher is better than you think (tips, tricks, and how they work) (Video):

The transcript discusses various tips for improving the performance of dishwashers by understanding their mechanics and using appropriate detergent. Key points include:

1. Checking and cleaning the removable filter regularly, as it can collect food residue over time.

2. Ensuring the kitchen sink water is hot before starting the dishwasher to enable efficient cleaning with the heating element.

3. Using basic detergent products in both pre-wash and main wash compartments of the dispenser, or directly in the wash tub if necessary.

4. Consider using more cost-effective powder or gel dishwasher detergents instead of tablets or packs.

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