

# Links für 2024 KW 15

Zusammengefasst von [LlongOrca](#).

## **The Disturbing Truth About How Airplanes Are Maintained Today:**

Over the last decade, major U.S. airlines have shifted significant maintenance work to countries like El Salvador, Mexico, and China, where few mechanics are FAA-certified and inspections lack authority. This offshoring has led to a decrease in maintenance jobs at U.S. carriers from 72,000 in 2000 to fewer than 50,000 today. The Federal Aviation Administration (FAA) is supposed to inspect these overseas facilities, but due to lack of funds and manpower, this has become increasingly difficult. There have been several incidents reported where offshore maintenance work has led to safety issues on airplanes. With the FAA's resources dwindling, it is up to the airlines themselves to oversee the heavy maintenance of their aircraft.

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## **AutoMQ: Truly serverless Kafka solution that maximizes the benefits of cloud:**

This article discusses an open-source project called „automq“ which is a cloud native implementation for Apache Kafka. It claims to reduce your cloud infrastructure bill by up to 90%. The website's license is unknown, and there are no specific licenses mentioned in the article.

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## **Why is software quality worse than a decade ago:**

The article explores the reasons behind the ongoing quality crisis in software, despite advancements. Software complexity, specialized roles like user experience experts and quality assurance engineers, competency crisis among developers due to decreased attention spans, overemphasis on design patterns and abstractions, and the emergence of high-level programming languages that democratize access to a software engineering career are some factors contributing to this issue. The author believes that AI may exacerbate the quality crisis in the future.

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## **1928: Seven Years - explain xkcd:**

The xkcd comic titled „Seven Years“ is a sequel to comics 1141 and 2386, and follows the journey of Randall and his wife after her diagnosis with cancer in late 2010. The comic explores their feelings and experiences over seven years while waiting for the next total solar eclipse in 2024. Throughout the storyline, various panels highlight the couple's personal growth, their relationship, and their determination to face the unknown future together.

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## **The Periodic Table of Primes:**

The Periodic Table of Primes (PTP) is a study that establishes the relationship between prime numbers and their offspring by identifying 48 integers as the roots of all primes, twin primes, and composites

without factors of 2, 3, 5, and 7. The PTP uses four prime numbers (2, 3, 5, and 7) to demonstrate how these numbers are related and spread. This study also introduces the Formula of Primes, the Counting Functions of Primes and Twin Primes, as well as their suggested citation by Li, Han-Lin, Fang, Shu-Cherng, and Kuo, Way (January 25, 2024).

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### **Press Release | U.S. Department of Energy Announces \$10 Million to Explore Using Plants to Extract Critical Materials from Soil to Support Domestic Supply Chain:**

The U.S. Department of Energy (DOE) is investing up to \$10 million in funding to explore nickel extraction from soil using plants, known as phytomining. This process aims to establish a competitive domestic supply chain and supplement conventional mining methods while reducing nickel imports. Managed by the Advanced Research Projects Agency-Energy (ARPA-E), this effort supports President Biden's Investing in America agenda, which focuses on strengthening domestic critical materials supply chains, enhancing economic and national security, and meeting growing demand for clean energy technology. Nickel is a key component used in lithium-ion batteries found in electric vehicles, consumer electronics, and other applications. Phytomining seeks to optimize the biotic systems that regulate nickel availability and uptake by hyperaccumulator plants and understand the interrelationships of geologic, ecological, and economic factors affecting phytomining potential.

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### **Mysterious object in the gap:**

The LIGO Livingston detector observed a mysterious signal, GW230529, on May 29, 2023, from the merger of a neutron star with an unknown compact object, likely an unusually lightweight black hole. The mass of the object falls into the „lower mass gap“ between heaviest neutron stars and lightest black holes. Researchers at the Max Planck Institute for Gravitational Physics contributed to this discovery using accurate waveform models, new data analysis methods, and advanced detector technology. This event increases expectations that more events will be observed with electromagnetic waves in the future. The fourth observing run of gravitational-wave detectors has recently started, aiming for increased sensitivity and improved search methods.

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### **1,800-year-old Roman statue discovered in parking lot | CNN:**

A 2,000-year-old Roman marble head of a lady was discovered by construction workers building a parking lot in England's Burghley House estate. The statue is believed to have been purchased during the late 18th century when the ninth Earl visited Italy and added an iron dowel for attachment purposes. It is uncertain how the statue ended up buried under soil at the site, with possible explanations ranging from a burglary gone wrong to careless discarding by someone else. The find will be displayed alongside other statues collected by the ninth Earl at Burghley House.

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### **LLMs Are This Close To Destroying The Internet:**

The article discusses the current state of the internet and its potential demise due to the dominance of search engines like Google, which are incentivized to promote ad-laden content over quality information. With the rise of AI and LLMs (Large Language Models), websites may be replaced by

automated systems that generate content based on existing data. This could lead to a lack of diverse opinions and perspectives, as well as a decline in human-generated content. The author argues that it is important for humans to maintain their presence online and continue sharing their ideas, experiences, and creative works to keep the internet alive and vibrant.

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### **Scientists discover first algae that can fix nitrogen — thanks to a tiny cell structure:**

Researchers have discovered a new organelle called a nitroplast in algae that can convert nitrogen gas into a form useful for cell growth. This finding could aid efforts to genetically engineer plants to fix their own nitrogen, increasing crop yields and reducing the need for fertilizers. The discovery was made possible through work by study author Kyoko Hagino at Kochi University in Japan, who spent around a decade fine-tuning a way to grow the algae in the lab, allowing it to be studied in more detail.

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### **Hospitals that make profits should pay taxes:**

The Internal Revenue Service (IRS) allows most U.S. hospitals to pay no federal taxes, which has raised concerns about the agency's role in healthcare. Nonprofit hospitals are granted tax-exempt status but often take advantage of low-income patients with inflated medical bills. Some hospitals sue and garnish wages from those who cannot afford their bills, while others make contesting a bill difficult or do not comply with transparency rules requiring them to post prices for common services. Congress could pass a law disqualifying hospitals that use these practices from receiving tax-exempt benefits. Nonprofit hospitals claim they provide millions in free care, but this often consists of emergency care required by law, which patients are then pursued for payment after treatment. For-profit hospitals have been found to provide more charity care than nonprofits. Critics argue that if hospitals schedule appointments based on patients' ability to pay, they should be taxed like other American businesses.

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### **Problem with selling developer tools is that devs have no purchasing authority:**

The article discusses the challenges faced by developers when trying to purchase software tools for their work due to a lack of purchasing authority within their organizations. It suggests that companies should focus on selling developer tools to decision-makers like CTOs, CFOs, and heads of HR or Sales who have the ability to approve larger purchases and push these tools down the hierarchy. The article also mentions successful examples such as JetBrains and Ida, where developers have personal purchasing authority for certain tools.

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### **Making Truth Social Comply With The AGPL:**

The article discusses the open source licensing issue surrounding Truth Social, a social media platform created by Trump Media & Technology Group (TMTG). TMTG has been identified as using code derived from Mastodon, which is licensed under the AGPL. When the author of the article investigated further, they found that while some files were missing in Truth Social's source code, TMTG eventually complied with the AGPL by providing an updated and up-to-date version of their

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source code. The author emphasizes the importance of standing up for one's beliefs and understanding the power individuals have to make a difference, even when going against powerful entities.

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### **Obituary for a Quiet Life — THE BITTER SOUTHERNER:**

This article is a personal reflection on the memories of an individual's loved one who passed away after nearly 70 years of banter and conversation with his wife, „Grandma“. The author reminisces about the unique phrases used by their loved one, such as „ever which a'way but loose“, and shares how they were raised in North Carolina mountains. The article emphasizes on the quiet and gentle nature of the man who could go hours without speaking but always had wit at his disposal. It ends with the author visiting the deceased for the last time, saying their final goodbyes and remembering the „quiet and steady“ goodness that will be missed.

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### **Government awards \$45B to company treating over 50M gallons of leaking radioactive waste: 'One of our nation's most important environmental challenges':**

A Virginia company, H2C, has been re-awarded a 10-year contract worth \$45 billion by the U.S. Department of Energy for cleaning up millions of gallons of radioactive and chemical waste at the Hanford Site in Washington State. The site produced almost two-thirds of the plutonium for America's nuclear weapons program during World War II and the Cold War, resulting in 56 million gallons of hazardous waste stored underground. H2C will now be responsible for tank retrieval and closure as well as designing, constructing, and operating waste facilities with environmental health and safety as top priorities.

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### **Device stopped working because your medical prescription has expired:**

The iTEAR 100 medical device requires a prescription and subscription for continued use, which has led to controversy over the necessity of these requirements. Critics argue that this is an example of end-stage capitalism, in which profit motives can lead to ethical concerns, such as the withholding of needed treatment due to expired subscriptions or unrenewed prescriptions. The need for continued supervision by a doctor may justify requiring a prescription, but it does not necessarily warrant that the device maker should demand eternal payment from patients.

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### **The darker side of being a doctor:**

The article is a personal account of a surgeon's experiences, detailing the struggles they have faced in their career and how it has impacted them both personally and professionally. The three main issues discussed include loss of control, loss of support, and loss of meaning within the medical industry. The author argues that these factors can contribute to burnout, anxiety, and depression among doctors, as they struggle to maintain work-life balance, receive proper support, and feel fulfilled in their profession amidst increasing administrative pressure.

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### **Notes on git's error messages:**

This article discusses the confusion around Git error messages and provides strategies to get more information when an error message isn't informative. The author suggests that improving error messages can be challenging due to various factors such as maintaining consistency, translating messages into multiple languages, and ensuring that new error messages are actually better than the existing ones. They go through several Git error messages, explaining what they find confusing about them and how they deal with it. The article concludes by expressing hope that some of the insights shared will be helpful to others facing similar challenges.

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### **Nobody Knows How Well Homework Works:**

The effectiveness of homework has been widely debated, with research studies on the topic being criticized for their methodology and reliability. Many studies use „time spent doing homework“ as an independent variable and correlate it with test scores or grades, but there are concerns about how accurately time is reported by students and parents. Additionally, using „time spent doing homework“ as a proxy for the amount of homework can be misleading due to various factors not taken into account.

Despite these issues, some randomized studies have suggested a positive effect of homework on test scores with medium-to-high effect sizes. A more recent individually randomized study by Nawaz and Welbourne found that students with more homework performed better in algebra classes, confirming that high school math homework is useful. However, the extent to which other subjects or grade levels would follow this pattern remains unclear. Overall, it seems that the effectiveness of homework remains an open question for further research and debate.

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### **Yes, But Can You Really Explain the Difference Between Morals and Ethics?:**

This article discusses the differences between a hermit and an anchorite, maze vs. labyrinth, ethics vs. morality, and parable vs. fable. A hermit is someone who retires from society to live alone in the wilderness, while an anchorite does so within an enclosed cell attached to a church. Hermitages can be found in various locations, ranging from caves to nearby detached buildings on monastery property. Anchorites used to serve as spiritual guides for their communities and were considered „dead to the world“ during their walling-in ceremony.

A maze has many paths and challenges one to find the exit, while a labyrinth is an exercise designed to calm down the mind with its repetitive and uncomplicated motion. Labyrinths have served various ritual and religious purposes throughout history, often symbolizing the path to salvation or personal transformation.

Ethics refers to rational principles of right and wrong that are explicit in one's social or professional community, whereas morality is a felt sense of right and wrong dictated by an individual's conscience or god. An immoral act may lead to more severe consequences than an unethical one.

A parable is a brief tale with a moral lesson that often features humans, while a fable has the same purpose but includes animals to illustrate a point about human folly. Fables are generally lighter and

more ironic, whereas parables convey deeper or complex messages about the human condition.

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### **Working From Home Claims Another Victim: Burglars - Bloomberg:**

The number of burglaries in the US has fallen 9.8% last year, marking the 12th consecutive annual decline and the 29th in the last 35 years, according to the Federal Bureau of Investigation's quarterly crime report. This decline is primarily due to improved home security systems like alarm-company signs, deadbolt locks, and doorbell cameras, which make it harder for burglars to get away with valuables. Additionally, working from home has also contributed to the drop in residential burglaries as people tend to be at their homes during the day, providing an extra layer of surveillance known as „eyes on the street.“

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### **Blocked:**

The article explains that a network policy has blocked the user's request. To regain access, they should log in or create an account on Reddit. Developers need to register with their credentials and use a unique and descriptive User-Agent string. If issues persist, users can file a ticket by including their IP address (185.232.69.199) and Reddit account information.

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### **Haunting Photos of the Bison Extermination in 19th Century America - Rare Historical Photos:**

The Haunting Photos of the Bison Extermination in 19th Century America article discusses the impact of European settlers on American bison populations during westward expansion and the rapid changes brought by railroad construction. Native Americans relied heavily on hunting for food, clothing, shelter, and spiritual significance from these once-plentiful animals. As their numbers were reduced to around 325 by the late 1800s due to mass hunting practices, conservation efforts have since been implemented to prevent future population crashes and preserve bison populations.

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### **"Brightest Of All Time": Mit Abstand heftigste Sternenexplosion wirft Fragen auf:**

A group of researchers discovered that the strongest gamma-ray burst (GRB) ever observed, known as GRB 221009A and nicknamed „BOAT“ or „Brightest Of All Time,“ originated from a supernova. The team had initially predicted that gold and platinum would form during the event, but there is currently no evidence of this. This has left unanswered questions about where heavy elements in the universe, such as gold and platinum, are created. The researchers found traces of calcium and oxygen from the supernova using the James Webb Space Telescope. However, the explosion itself was not brighter than other similar events. One mystery is how the differences between this event and others fit together. Another is why heavy elements were not formed during the supernova if that was an expected outcome. The research team also discovered that the galaxy in which the explosion occurred has a lower metallicity, meaning it contains fewer heavier elements than water and carbon. Additionally, there are indications of high stellar birth rates in this galaxy. The connection between these factors and the particularly bright gamma-ray burst remains unknown, and further research into this extraordinary event will be necessary.

### **So findest du ALLES mit Google:**

The article is about how to improve your Google searches and get better results by using search operators, browser shortcuts, and other tips. It covers advanced techniques such as reverse image search, Google Alerts, and exploring alternative search engines like DuckDuckGo. Overall, the article emphasizes the importance of understanding search engine functionality to find more accurate results.

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### **I Lost Faith in Kagi:**

The author discusses their concerns about the search engine Kagi, highlighting issues such as the company stretching itself too thin with multiple projects and a lack of focus on its core search product. They also express skepticism towards Kagi's use of AI in their search results, which they believe often leads to incorrect information. The author further criticizes Kagi for investing in non-essential projects like t-shirts, an email service, and a browser, which they view as misallocation of resources. Additionally, the author raises privacy concerns based on comments made by Kagi's CEO, who expressed skepticism about the need for anonymity and suggested that only criminals would require it. The author concludes by expressing disappointment in Kagi's direction and questioning their commitment to user privacy and data protection.

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### **Hospital websites share visitors' data with Google, Meta:**

A study by the University of Pennsylvania found that 96% of non-federal acute care hospital websites shared user data with third parties, including Google, Meta, and data brokers. This is in addition to the fact that only 71% of these sites had a privacy policy, and even those that did often failed to identify specific third-party companies that could receive user information. The researchers suggested using browser-based tools like Ghostery or Privacy Badger to help protect personal information from being shared with third parties.

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### **Bypass Paywalls repository is gone:**

The article discusses the Streisand Effect and a browser extension that helps bypass paywalls on websites. The extension, called „Bypass Paywalls,“ has been taken offline due to an unknown reason, but users have shared alternative links and mirrors for the extension. Users express concern about the future of the project as there seems to be no active maintainer at this time.

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### **Why Russia's Democracy Never Began:**

The article discusses how Russia's political system never experienced a true democratic transition after the collapse of the Soviet Union in 1991, but rather went through a temporary weakening of the state. This is evidenced by the lack of elite rotation and preservation of formal and informal institutions from the past that characterized Russia's political system during its communist era. The



re-autocratization of Russian politics was inevitable as no significant changes were made to challenge the old order, and the new democratic rules never took hold. The article argues for a focus on elite composition when studying transitions, emphasizing that elite rotation is crucial for successful democratic transformations. It also highlights how Russia's history of communist rule and lack of pre-communist liberal traditions have contributed to the persistence of nomenklatura within its political system.

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### **Childhood Loneliness Linked to Later Psychosis - Neuroscience News:**

A new study suggests that children who felt lonely for more than 6 months before the age of 12 are more likely to experience an episode of psychosis than children who did not, with women more affected than men. The study differentiates between loneliness (subjective feeling) and social isolation (objective lack), showing loneliness as a potent early risk factor for psychosis. Among women who experienced psychosis, those who were lonely in childhood were significantly less likely to be diagnosed with schizophrenia spectrum disorders, suggesting varying impacts on different types of psychosis.

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### **What is Webb observing?:**

The article discusses an upcoming observation by the Webb Space Telescope, which will observe SDSSJ1155+5714 as part of a research program focused on high-redshift kpc-scale dual quasars. This observation is scheduled for Thursday, April 11, 2024, from 23:32:31 (UTC) to Friday, April 12, 2024 at 0:22:26 (UTC). The principal investigator of this research proposal is Yu-Ching Chen.

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### **NVIDIA Linux Open GPU with P2P support:**

The article discusses the NVIDIA Linux open GPU with P2P support, which has been forked from the original repository (NVIDIA/open-gpu-kernel-modules). It has 103 stars and 1,100 forks, and includes information on its license.

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### **Why I Lost Faith in Kagi:**

This article discusses the reasons why the author lost faith in Kagi, a paid search engine claiming to focus on privacy. The main issues include: stretching itself too thin with multiple projects; questionable financial decisions such as spending significant funding on a t-shirt company instead of focusing on their core services and paying sales tax late; a deep dive into AI tools and how they might not be the solution to users' concerns regarding other search engines; and an unwavering dedication to AI, despite privacy concerns. The author concludes by sharing information that may not be known by many Kagi users and encourages others to make informed decisions based on this information.

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### **Unit Tests Considered Harmful:**



This article discusses the concept of unit testing in software engineering, which often focuses on a single class being tested while mocking its dependencies. The author argues that this approach is flawed as it does not ensure the feature actually works and makes it difficult to change the behavior or interface of classes. Instead, the author suggests extracting IO operations to adapters, testing them separately, and using reliable fakes for testing the bulk of the system's behavior from the outside. The focus should be on ensuring that the software solves users' problems rather than focusing solely on test coverage.

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### **What happens when we pay public high school teachers based on performance:**

The article discusses the results of a study that examined the effects of flexible pay for public school teachers on the composition of the workforce, teachers' effort, and student achievement. A switch from seniority-based salary schedules to pay-for-quality in some Wisconsin school districts led to high-quality teachers moving to these districts, while low-quality teachers either moved to districts that remained with the salary schedules or left the public school system altogether. As a result, the composition of the teaching workforce improved in flexible pay districts, effort exerted by all teachers increased, and student test scores improved. The study's findings suggest that performance-based pay systems can have a positive impact on the quality of education provided to students.

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### **The Labor Market for Teachers under Different Pay Schemes:**

This article discusses the impact of different teacher compensation schemes on various aspects related to education, such as teacher quality, effort, and student achievement. Specifically, it focuses on the effects of flexible pay (FP) versus seniority-based pay (SP) in public school systems. The study utilizes data from Wisconsin schools following a significant policy change known as Act 10 that allowed for more flexibility in teacher compensation.

The main findings of the research include:

1. Introduction of FP led to an increase in salary dispersion among similar teachers, suggesting that districts were able to reward teachers based on attributes not directly rewarded by traditional schedules.
  2. Teachers with higher value added (VA) - a measure of effectiveness - received significantly higher salaries after the introduction of flexible pay schemes. This indicates that schools can identify and compensate highly effective teachers when given the opportunity to do so.
  3. The policy change led to an increase in cross-district movements, particularly from SP to FP districts, as high-quality teachers sought better compensation opportunities. Conversely, low-quality teachers with high seniority and academic credentials were more likely to move to SP districts or leave public schools altogether.
  4. Effort exerted by all teachers increased following the introduction of flexible pay in a subset of Wisconsin school districts, which was associated with improved student test scores.
  5. The changes in teacher composition and effort due to flexible pay resulted in significant improvements in student achievement over time.
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### **Kubernetes is not the point — Betty Junod:**

Docker was born in 2014 as a container ecosystem solution, offering developer and operator experiences without building and maintaining the platform. The massive adoption of containers led to questions about how to handle these apps beyond developer's laptops. Internal Developer Platform or Platform Engineering is making a comeback with a focus on purpose rather than component thinking. This shift emphasizes solving problems faced by developers, operators, and specific application patterns using the right platform, services, or mix of technologies.

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### **a classic 3-D first-person shooter:**

This article discusses the DOS platform games DESCENT (1995), DESCENT II (1996, also made for Windows 95), and DESCENT III (1999). The author has created pages for each game, with information on release dates, features, add-ons, mods, and ports to other systems. There are also walkthroughs of the levels available, as well as details on robots in D1, weapons and items used in the games. The legal stuff section clarifies that all copyrights belong to their respective owners, and the typefaces used are from the original game releases or related companies.

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### **Naismith's rule:**

Naismith's rule is a method for calculating the time required to complete a walking or hiking expedition, including any extra time needed when walking uphill. It was devised by Scottish mountaineer William W. Naismith in 1892 and has been updated over the years with various adjustments accounting for different terrain, group fitness levels, and pack weights. The original rule suggests allowing one hour per three miles forward and an additional hour per 2000 feet of ascent.

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### **I asked 100 devs they aren't shipping faster. Here's what I learned - Greptile:**

The article discusses the topic of development velocity, which is a priority for CTOs alongside quality and compliance. It highlights various factors that slow down developers, such as codebase dependency bugs, complicated codebases, microservices architectures, poor documentation, QA loops, waiting for spec approval, stakeholder involvement, writing tests, deployment/build speed, people (including nit-picky PR reviews and unclear requirements), motivation, debugging, and documentation issues. The author concludes by stating that larger companies generally struggle with shipping fast due to risk-aversion and bureaucracy, which can be challenging for developers to navigate.

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### **Why inheritance never made any sense:**

This article discusses three types of inheritance: ontological, abstract data type, and implementation inheritance. It highlights that these relationships are frequently irreconcilable and suggests focusing on one type at a time for better understanding and usage in programming languages. The author emphasizes the importance of not mixing inheritance with other concepts like domain-driven design and Liskov Substitution Principle, but rather treating them as separate entities to avoid complications.

## ETag and HTTP caching:

The HTTP ETag header is a useful tool for client-side caching in GET requests. Caching involves manipulating other conditional HTTP headers like If-Match or If-None-Match, but their interaction can be confusing. The basic workflow includes the client making a GET request to the server, receiving a response with content and an ETag header, caching both the response and ETag value. For subsequent requests, the client uses the If-None-Match header with the cached ETag. The server regenerates its own ETag and compares it to the client's; if they match, the server responds with a 304 Not Modified status indicating that the cached version is valid. This process can be tested using GitHub's REST API suite via the GitHub CLI. If ETags are consistent across servers, clients know when content has changed and avoid downloading it multiple times.

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## Devon Eriksen (@Devon\_Eriksen\_):

This article satirizes a conversation between an experienced software engineer, Devon, and a company called FooBar, Inc., regarding their use of Autotools instead of Cmake for managing open source projects. The software engineer tries to explain the concept of „technical debt“ due to hasty code writing but is met with resistance from the company. The article highlights the importance of maintaining good coding practices and the consequences of ignoring technical debt in software development.

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## Jonglieren mit Wahrscheinlichkeiten:

In the article, it discusses the concerns and anxieties faced by midwives when they encounter a „soft marker“ during an ultrasound screening, which is found in approximately 5% of pregnant women (Ahman et al., 2014). These soft markers can lead to significant uncertainty for the mother-child bond, but it's crucial for midwives to provide reassurance or support in decision-making regarding further diagnostic measures. Many expectant mothers want to know if their child may have a chromosomal abnormality, particularly Down syndrome, which is often associated with an older mother (Viaux-Savelon et al., 2012). The risk of having a child with Down syndrome increases from 1:1,000 at age 29 to 1:100 by age 40. While ultrasounds can only estimate the risk for trisomies (chromosomal abnormalities), invasive diagnostic procedures like amniocentesis are associated with a low miscarriage rate of about 1:200 (Wulff et al., 2016). The best risk assessment for chromosomal abnormalities is during the first trimester screening between weeks 11 and 13, which can detect over 90% of Down syndrome cases (Santorum et al., 2017). In the second-trimester screening between weeks 18 and 22, soft markers can also assess the risk for trisomies; however, detection rates are lower than in first trimester screenings.

The article explains that risk calculations based on individual soft markers are purely statistical and were overestimated in the past due to their initial association with known cases of chromosomal abnormalities (Agathokleous et al., 2013). For example, a „white spot“ or a microcalcification in the heart's papillary muscle was thought to be a marker for Down syndrome but is now known to be common in both affected and unaffected fetuses.

The article also explains that some soft markers are more reliable than others in assessing risk, such as the „white spot“ (24% of cases with Down syndrome vs. 4% of healthy ones), short femur length

(13% vs. 1%), mild kidney dilatation (70% vs. 5%), echogenic bowel (80% vs. 3%), and mild ventricular dilatation (69% vs. 2%). The positive likelihood ratio indicates how much the risk increases if a soft marker is present, while the negative likelihood ratio shows how much the risk decreases when the soft marker is absent.

The article concludes by suggesting that midwives should reassure and educate expectant mothers on soft markers, emphasizing that most fetuses with soft markers are healthy. If an ultrasound reveals a soft marker, it's recommended to consult a genetic counselor and undergo a first-trimester screening for a more accurate assessment of the risk. Invasive procedures should be considered when there is a high likelihood of Down syndrome or other chromosomal abnormalities.

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### **Pränataltests auf das Downsyndrom: Trügerischer Bluttest:**

The article discusses the noninvasive prenatal test (NIPT) for Down syndrome, which has been covered by statutory health insurance since July. Despite being able to exclude Trisomy 21 with very high probability, there is a 30% chance of false-positive results, particularly in younger pregnant women. The test can lead to an increase in late abortions and may cause some women not to seek further diagnostic testing due to the belief that NIPT provides comprehensive information about their child's health. In response, it is suggested that insurance companies should cover a full prenatal ultrasound examination instead of NIPT to detect other congenital anomalies and better inform women about their options.

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### **Verified curl - daniel.haxx.se:**

The article discusses the importance of verifying software packages, specifically focusing on the curl package. It explains how to detect if the curl package would ever make an xz and outlines various methods to verify its integrity, such as checking for binary blobs, disabled fuzzers, hidden payloads in tarballs, reproducibility of tarballs, signed tarballs, and signed commits. The author emphasizes that trusting the contents in git does not guarantee a backdoor-free package but suggests reviewing or paying someone else to review it for vulnerabilities. Additionally, the article mentions the difficulties in planting a backdoor in curl code due to its complexity.

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### **The Rise and Impending Fall of the Dental Cavity:**

Cavities are a communicable disease caused by the bacteria *Streptococcus mutans*, which is transmitted through close contact with parents and caregivers, such as sharing food and drinks. This transmission begins when the child's clean mouth is colonized by the mother's strain of *S. mutans*, leading to an acidic environment where cavities can form. A recent breakthrough in this area was the development of BCS3-L1, a Lactate Dehydrogenase Deficient (LDH-d) version of *S. mutans* that produces high amounts of bacteriocin and prevents caries. This strain is being developed for home delivery as an oral vaccine against cavities, potentially eliminating the scourge of poor dental health that has affected humanity for thousands of years.

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### **Yes, Social Media Really Is a Cause of the Epidemic of Teenage Mental Illness:**

In recent decades, there have been concerns about various influences on children and teenagers, such as novels, bicycles, comic books, rock and roll, and violent video games. Today, the debate revolves around the impact of social media and smartphones on mental health among adolescents. Psychologist Candice Odgers has questioned the correlation between increased social media usage and a rise in teenage mental illness, suggesting that there is no evidence to support this claim and that the issue might be overstated by alarm ringers.

In response, author Jean Twenge argues that hundreds of studies, including experimental and correlational ones, point towards causation rather than mere correlation between social media usage and mental health issues among teens. She also cites eyewitness testimony from members of Generation Z who blame social media for their mental health struggles.

Twenge further proposes four norms to be implemented in schools, including no smartphones before high school, no social media before the age of 16, phone-free schools, and more independence, free play, and responsibility outside the digital world. The author acknowledges that implementing these norms might not yield immediate benefits but believes it is worth trying to reverse the negative impact of phone-based childhood on mental health.

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### **How we built the new Find My Device network with user security and privacy in mind:**

The new Find My Device from Android uses a crowdsourced device-locating network to quickly find lost or misplaced devices and belongings, even when they're offline. It provides multi-layered protections across data safeguards, safety-first protections, and user controls for privacy and security. Location crowdsourcing works by harnessing the proximity of nearby Android devices to report the location of a Bluetooth tag. The network has undergone internal red team testing and is compliant with joint industry standards for unwanted tracking. User control features allow users to opt into non-aggregated locations, contribute to aggregated reporting, or turn off the network altogether.

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### **Why do airlines charge so much for checked bags? This obscure rule helps explain why:**

Five out of six largest U.S. airlines have increased their checked bag fees since January 2024. A tax-law loophole in the U.S. tax code allows airlines to avoid paying around half a billion dollars in taxes per year by splitting up baggage charges from the payment for transportation. This has led to an increase in domestic bag fees, with airlines collecting over \$7 billion in 2023. Travelers can minimize higher bag fees by traveling light and not checking any luggage.

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### **The Open Secret about Confidential Computing:**

Confidential Computing aims to protect running workloads from their environment, reducing the Trusted Computing Base (TCB). The main push comes from public cloud vendors to enable running more sensitive workloads. Main technologies used by Azure and GCP are AMD SEV-SNP, Intel SGX, and Intel TDX. However, these have faced attestation key extraction issues, such as in the case of Intel SGX for breaking UHD Blu-ray DRM. Architectural decisions might continue to produce bugs, making microcode workloads exposed to side channel attacks. AWS uses their proprietary Nitro system but lacks public details and external scrutiny. While reducing TCB is a desirable goal, the current state of Confidential Computing shows measured enthusiasm is necessary.

## Google's Chrome Antitrust Paradox:

This article examines Google's dominance in the browser market and its role in reinforcing the company's position in online advertising and publishing through Chrome, which is perceived as a neutral platform built on open-source technologies. The authors argue that Chrome serves as a key tool for Google to maintain and extend its market power, often at the expense of competition and innovation. They discuss potential regulatory interventions and remedies based on historical antitrust precedents. The article highlights the need to address this gap in order to ensure a competitive digital environment that nurtures innovation and safeguards consumer interests.

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## SSSL - Hackless SSL bypass for the Wii U:

This article discusses a commit in a GitHub repository with the SSSL/Public Notifications branch. It has been forked once and starred 77 times, utilizing the GPL-3.0 license. The commit is not associated with any branches within the repository but may belong to a fork outside of it. However, the article mentions that „You can't perform that action at this time,“ which implies that there may be limitations in performing certain actions related to the commit or its associated information.

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## How I Tripped Over the Debian Weak Keys Vulnerability:

The 16th anniversary of the disclosure of a Debian OpenSSL package vulnerability will be marked next month. This vulnerability allowed for predictable private keys to be generated for about 18 months, leading to potential security threats. In March 2008, Engine Yard discovered that GitHub was experiencing issues with SSH login times due to the number of keys in its `~/.ssh/authorized_keys` file. To resolve this issue, they patched OpenSSH to look up keys in a MySQL database, indexed on the key fingerprint. This patch helped improve SSH logins speed but also led to users being able to access other users' repos over SSH. The GitHub team discovered that some users had keys with the same fingerprint, which was due to Debian maintainer's cleanup of OpenSSL's randomness generation code. This reduced the number of possible keys generated by a user from billions to around 32,000.

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## Don't require people to change 'source code' to configure your programs April 8, 2024:

The article emphasizes that using build time configuration settings through methods such as editing Makefiles or header files is not an ideal approach for software development. This method can lead to errors and conflicts when updating the software, as users would need to merge their changes with the new release's configurations. Instead, the author suggests maintaining build-time configurations entirely outside of what the software provider ships, allowing a more manageable system and reducing conflicts between updates.

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## MapSCII - The Whole World In Your Console.:

This article is about MapSCII, a Braille and ASCII world map renderer designed for consoles. To use it

on Mac or Linux, users need to install telnet using brew, while Windows users can connect with PuTTY. The project has an MIT license and has received 7k stars and 232 forks.

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### **5 ways to use the new Find My Device on Android:**

The new Find My Device experience is now available on Android devices around the world, starting in the U.S. and Canada. It uses a crowdsourced network of over a billion Android devices to help users locate their misplaced devices or everyday items quickly and securely. Users can locate offline devices, keep track of everyday items with Bluetooth tags from Chipolo and Pebblebee, find nearby items, pinpoint devices at home using Nest, and share accessories with friends and family. The Find My Device network is private and secure by design, offering multi-layered protections for user safety and privacy.

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### **After AI beat them, professional go players got better and more creative:**

The game of Go experienced a significant improvement in decision quality from 1950 to the mid-2010s as players reached a plateau. However, after DeepMind's AlphaGo AI beat the best human players, the weakest professionals surpassed the strongest ones before AI. The players improved not only by imitating the AI but also becoming more creative with moves that deviated from what the AI would do. This flourishing of creativity suggests that superhuman AI systems can push humans to reevaluate certain moves and break through blockages in their skills. The development in Go shows that, as humans learn from AIs, they might be able to push beyond limitations and reach higher levels of performance.

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### **It's getting hard to use and recommend Firefox, I'm afraid for the free web:**

The article discusses the author's experience with Firefox as their primary browser, highlighting issues they faced such as video call interruptions and constant breakage. They argue that despite its flaws, preserving the free web requires having more stakeholders than just Google and Mozilla, which is why they continue to use Firefox. The author hopes that under new leadership, Mozilla can regain its footing by leaning into data privacy, allowing them to make a clear pitch for everyday users.

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### **Distributed SQLite: Paradigm shift or hype?:**

This article discusses the use of SQLite as an edge database, highlighting its pros and cons in distributed environments. The author emphasizes that while SQLite is fast and efficient on single servers, it can become complex when used in more than one machine or datacenter due to asynchronous replication issues and eventual consistency problems. They argue for focusing on HTTP caching instead of trying to force complexity into applications by using SQLite as a backend database. The author also recommends PostgreSQL over SQLite for most use cases, considering it a better abstraction for database management in large organizations.

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## blocky:

The article discusses Blocky, a DNS proxy and ad-blocker developed in Go language that features blocking of DNS queries with external lists (ad-block, malware) and whitelisting options for different client groups. It offers advanced DNS configuration options like customizable caching, conditional forwarding to external servers, and supports various modern DNS protocols. The software improves network speed, provides security through privacy extensions, is open source, and integrates with Prometheus metrics, Grafana dashboards, REST API endpoints, and CLI tools. Blocky is designed for simple installation, configuration, and stateless operation.

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## PDF: Build Systems à la Carte: Theory and Practice:

In the paper „Build Systems à la Carte: Theory and Practice“ by Mokhov, Mitchell, and Peyton Jones, they explore the design space of build systems and present a framework for understanding and comparing them. They identify key properties such as static vs dynamic dependencies, local vs cloud, deterministic vs non-deterministic build tasks, early cutoff, self-tracking build systems, and the type of persistently stored build information.

The paper also presents executable abstractions that can express the intricacies of build systems, including task descriptions, build system components like schedulers and rebuilders, and types of tasks such as TaskApplicative, TaskMonad, and TaskFunctor. They discuss different types of rebuilders, such as Verifying Traces, Constructive Traces, Deep Constructive Traces, and the challenges associated with each.

The authors implement various build systems using their framework, including M A K E, SH A K E, BA Z E L, C L O U D B U I L D, and N I X. They also present a model of C L O U D S H A K E, which combines the advantages of minimalism, early cutoff, and monadic dependencies with cloud-capable build systems.

The paper concludes by discussing their experience implementing and using these build systems in practice, including challenges such as dealing with errors, parallelism, impure computations, cloud implementation, key-dependent value types, self-tracking, and file watching vs polling. The authors also relate other build systems to their abstractions and discuss related work on self-adjusting computation and memoization.

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## Big Tech passkey implementations are a trap | Proton:

Proton Pass now supports passkeys on all devices, aiming to make them universal and accessible to everyone. The original goal behind passkeys was to provide faster, easier, and more secure sign-ins while reducing reliance on passwords; however, Apple and Google's implementations prioritized locking users into their ecosystems rather than providing a secure solution for all. Proton Pass aims to make passkey usage easy, open-source, and available to everyone with its free plan, emphasizing the importance of ensuring passkeys fulfill their potential for universal adoption.

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## Paying Off People's Medical Debt Has Little Impact on Their Lives, Study Finds:

R.I.P. Medical Debt, a nonprofit group, has relieved Americans of \$11 billion in hospital bills over the past decade. However, a study found that debt relief did not improve mental health or credit scores for those who received assistance and were just as likely to forgo medical care as those with unpaid bills. The researchers followed 213,000 people in debt and randomly selected some to work with the nonprofit group.

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### **Turchin's terrifying predictions:**

Peter Turchin's book „End Times“ explores how science can be applied to history, using large data sets to identify key indicators for political instability. The factors he highlights include declining real wages, growing income inequality, overproduction of graduates, decreasing public trust, and escalating public debt. These factors contribute to the wealth pumping money towards the top of the economic pyramid, leaving the poor and middle class behind. This disconnect between the credentialed class (graduates) and the working class (deplorables) exacerbates the political instability in countries like the US, UK, and Europe. Turchin's hypothesis predicts a battle among aspirant graduates for declining opportunities and rewards, which could lead to far-right movements like Trumpism and Brexit.

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### **Poor Predictors: Job Interviews Are Useless and Unfair:**

The traditional, unstructured job interview is a poor predictor of future performance and success due to its limited sample size, the difficulty in judging someone's character or skills based on a single conversation, and interviewer bias. Despite these shortcomings, the job interview remains popular because it is easy to organize, conduct, and people prefer the personal nature of the process. Better alternatives for predicting future performance include structured interviews, situational interviews, and „job auditions.“ Employers should consider hiring candidates who refuse to participate in an unstructured interview process.

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### **I tried Tesla FSD:**

The author discusses their experience with Tesla's Full Self Driving (FSD) feature, which they found to be very frightening and unreliable. They mention that usage of the feature has been low due to its high cost and potential safety concerns. Despite being a Tesla owner, they would not pay for FSD and recommend spending money on other things instead. The author concludes by stating that they would only consider using an autonomous vehicle for long road trips.

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### **Long Covid blood clues could prompt future trials:**

A UK study suggests that people with long Covid have evidence of continuing inflammation in their blood, which could help understanding of the condition and how it may be treated. The presence of certain proteins increased the risk of specific symptoms, such as fatigue, in those sick enough to need hospital treatment. It is unclear whether milder cases of Covid have the same effect on the body. Long Covid - symptoms lasting at least 12 weeks after a Covid infection - is thought to have affected millions worldwide. The research found that some proteins in the blood of those with long Covid could

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be linked to their specific symptoms, which may lead to the development of specific tests and treatments for various types of long Covid.

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### **Baldiges Urteil im Vastaamo-Hack: Verräterische Transaktionen:**

In einem beispiellosen Hack wurden Patienten mit gestohlenen Daten erpresst, um den mutmaßlichen Täter zu überführen. Die Polizei hat Monero-Transaktionen nachverfolgen können, indem sie eine Kryptowährungsspur folgte, die zu K.'s Monero-Konto führte. Die Ermittler haben auch herausgefunden, dass K. Zugang zu verschiedenen Servern hatte, die mit den Patientendaten-Servern in Verbindung standen. Am 30. April wird das Urteil im Fall Vastaamo verkündet.

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### **Autism and ADHD are linked to disturbed gut flora very early in life:**

A study led by researchers from the University of Florida and Linköping University found that disturbed gut flora in infants is associated with neurodevelopmental disorders such as autism spectrum disorder, ADHD, communication disorder, and intellectual disability later in life. The study examined the composition of gut flora, along with several other factors, in relation to the development of children's nervous systems. Researchers found that biological markers associated with future neurological disorders were present at birth in cord blood or stool samples taken from one-year-olds a decade before diagnosis. Factors such as antibiotic treatment during infancy, repeated ear infections, and the presence of specific gut bacteria were identified as potential contributors to neurodevelopmental disorders. The study suggests that early identification of these biomarkers could lead to screening protocols and preventive measures in the future.

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### **What Does My Cancer Diagnosis ACTUALLY Mean? (Video):**

The video discusses the complexity of cancer diagnosis and the various systems used to stage and grade it. Firstly, it explains that the staging system begins at 0 (ductal carcinoma in situ or DCIS) and progresses through stages 1-4, classifying the cancer based on its spreading capabilities. The video also introduces the TNM system (T for tumor size, N for lymph nodes affected, and M for distant metastasis), which is another way to stage cancer, with each letter indicating a specific aspect of the disease's progression.

Additionally, the video explains that doctors determine how aggressive the cancer is by examining its morphology (microscopic appearance) under a microscope and assigning it a grade from 1 (well-differentiated) to 3 (poorly differentiated). Some cancers have their own specific grading systems, but they all follow the same principle of higher numbers indicating more aggressive cells.

Finally, the video emphasizes that understanding these terms and results is crucial for tailoring treatment based on each patient's unique situation. It aims to help patients feel more comfortable with their diagnoses by explaining the various staging systems, grading methods, and how they all contribute to determining the most effective course of action.

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### **Keyless Go - schlüssellos Auto los 🚗 Marktcheck SWR (Video):**

This video discusses the growing problem of car thefts using keyless systems and provides information on how criminals are exploiting this vulnerability. Key points include:

1. Car thieves typically operate at night, sometimes with homemade devices or smaller tools that can intercept signals from keyless entry systems.
2. The victim in the video had saved for years to buy a Mercedes AMG GLE 63 Coupé and it was stolen using this method.
3. Keyless systems are not standard remote keys; they don't require pressing buttons, but simply approaching the car with the key unlocks it.
4. This convenience is being exploited by thieves who can extend the range of the signal between the car and the key, allowing them to unlock and even start vehicles without having the physical key.
5. Since 2019, many models are particularly vulnerable to this type of theft; nearly all well-known brands are affected.
6. The ADAC has published an online list showing that only 45 out of 631 tested cars have keyless security technology to protect against such thefts.
7. There is a technology called U-WB (Ultra Wideband) that can detect how far away the key is based on signal timing, making it harder for criminals to intercept the signals. Some newer models are now better protected with this system in place.
8. Despite its availability for five years, many vehicles still have vulnerable keyless systems installed, and no one knows why or can appeal to manufacturers to fix these security gaps quickly.
9. For victims like Kevin Strohmann, insurance can help recover the stolen car's value (in his case, almost 80,000 euros). However, specific conditions must be met for this compensation.
10. Preventing keyless vehicle theft is possible by disabling the function at the door opening or storing the keys as far away from the car as possible, using an anti-signal box to block the key's signal, or keeping the key as far away from the car as possible.

Summary: The video highlights the issue of keyless vehicle theft and discusses how criminals exploit vulnerabilities in these systems. It also offers some prevention tips and emphasizes the need for manufacturers to address this issue more urgently.

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## **Handelskrieg China gegen die USA – Auf welcher Seite steht Deutschland – Auf den Punkt (Video):**

The topics discussed in the transcript of the YouTube video include:

1. Diplomatic and economic challenges between Germany and China. The conversation focuses on the need for realpolitik in both diplomatic and economic relations, as well as Germany's strategic interests in maintaining a balance in its relationship with China.
2. The transcript also covers the issue of human rights and the moral aspects of international business, highlighting that while Germany may have always practiced realpolitik, it is crucial for the country to be aware of the impact of its actions on both economic and moral dimensions.
3. A discussion about the potential dangers of China's strategic ambiguity, as well as how the United States and Europe are responding to the threat. The transcript delves into the consequences of a possible decoupling between the US and China, including the risks for European companies that heavily rely on Chinese markets and supply chains.
4. The conversation also touches upon the current economic situation in China, with concerns about the real estate market bubble, overcapacity issues in several industries, and a potential slowdown in the Chinese economy. The impact of these factors on German companies is also discussed.
5. Finally, the transcript explores the possibility of a de-globalization trend, particularly if Donald Trump were to win the US presidential elections again. This could lead to further regionalization and

increased trade barriers, affecting countries like Germany that have heavily benefited from China's economic rise.

In summary, the transcript of the YouTube video offers a comprehensive analysis of the complex relationship between Germany and China, as well as broader geopolitical implications for Europe and the United States. It highlights the risks associated with globalization, realpolitik in international relations, and the potential consequences of de-globalization trends.

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### **Trigger-Taktik – Gefühle als Waffe (mit Maxi Schafroth) – extra 3 – NDR (Video):**

The Youtube video discusses the increasing number of people who claim they no longer watch news due to issues such as climate catastrophe, inflation, economic crisis, heating bans, and language bans. It highlights Germany's challenging situation with rising costs, extreme temperatures, and political divisions. The video also examines the emotionalization of news through music beds, social media bombardment, and a lack of civil discourse around topics like police crime statistics.

It emphasizes the importance of rational thinking and arguing in politics and criticizes politicians who rely on emotions instead of facts. The speaker, Maximilian Schafroth, also discusses his role as an „Emotion Manager,“ working to provoke reactions from people by targeting their fears and anxieties.

In summary, the video raises concerns about Germany's challenges, the emotional manipulation in politics, and the need for a return to rational thought and civil discourse in public discussions.

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### **Actually Understand Type 2 Diabetes (Video):**

Type 2 diabetes is a widespread disease affecting more than 400 million people worldwide. It can be caused by the pancreas not producing enough insulin or when the body cannot properly use the insulin it produces. Insulin is responsible for regulating blood glucose levels, which are a result of converting food into glucose to distribute it to cells. Over time, uncontrolled diabetes can lead to hyperglycemia and damage various body systems, especially nerves and blood vessels.

Type 2 diabetes is the most common form, affecting over 90% of cases. Prediabetes is a category used for those who show signs of potential diabetes development but do not yet exhibit classic symptoms like excessive urination. Researchers continue to uncover genetic and environmental factors contributing to type 2 diabetes, such as increased body weight, lower physical activity levels, and certain social factors.

Managing type 2 diabetes involves monitoring blood sugar levels through hemoglobin A1c tests, maintaining a healthy diet rich in fruits, vegetables, whole grains, legumes, complex carbohydrates paired with fiber, and healthy fats, while also engaging in regular physical activity. Medications like metformin and semaglutide are prescribed when necessary to help control blood sugar levels. Remission is possible through a combination of lifestyle changes, but the duration of remission remains unclear.

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### **You Can't Shop Your Way Out of Climate Change (Video):**

The transcript discusses the issue of sustainability in consumer products and the assumption that buying green alternatives will help solve environmental problems. It highlights the need to rethink economic systems and focus on reducing consumption, rather than just switching to green products. Key points include:

1. Green products are not environmentally friendly if their manufacturing processes contribute significantly to emissions and resource depletion.
2. The global economy is operating in ecological deficit as countries like the U.S. consume resources faster than they can regenerate, contributing to climate change and pollution.
3. GDP measures economic activity rather than quality of life or environmental impacts.
4. We cannot buy our way out of climate change; instead, we need to rethink how our systems function by focusing on reducing consumption, improving urban planning, investing in renewable energy, and creating long-lasting products for all consumers.

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### Integration (Video):

The Transcript eines Youtube Videos covers various topics related to software architecture and integration. The main themes include the nature of integrating systems in modern software development, different types of integrations, the role of Enterprise Service Buses (ESBs), messaging systems, RESTful APIs, RPCs, databases, file sharing, and data mashing as means of integration.

1. Integration Problem: The first topic is about the problem of integrating systems in modern software development. Software-Systems are not isolated entities; they need to interact with other systems. This interaction can occur at two levels: system architecture level (where different services/components of a single system communicate) and enterprise architecture level (where multiple systems within an organization need to be integrated).

2. Integration Types: The speaker identifies several types of integrations, including those that ensure no cascading failures when one system fails, keep changes in one service from affecting others, or prevent availability issues from impacting other systems. These integrations can be bilateral or multilateral, with different levels of influence and communication.

3. Integration Goals: The goal of a good integration is to promote loose coupling between systems to avoid the spread of failures and maintain system availability. This also involves considering social communications between teams that are involved in integrating services.

4. Enterprise Service Buses (ESBs): ESBs are software tools used for facilitating communication and data exchange between different applications or components within an enterprise. They provide a central point for managing and routing messages, transforming data, monitoring communication, ensuring service redundancy, implementing standard protocols, and providing quality of service guarantees. However, the speaker expresses skepticism about their effectiveness due to potential bottlenecks, lack of flexibility in accommodating specific requirements, and the challenge of managing integration across diverse systems within an enterprise.

5. Alternatives to ESBs: The speaker suggests messaging systems as a viable alternative to ESBs. These systems allow for asynchronous communication between services, providing resilience, reliability, and transactional guarantees. They also enable the creation of distributed systems where each service can manage its local state while being part of a global system.

6. RESTful APIs: The speaker discusses REST principles, which are based on HTTP and provide a stateless, cacheable, and uniform interface for services. RESTful APIs allow for content negotiation,



hypermedia (HATOAS), and idempotent operations, offering flexibility in communication and integration. However, they are typically synchronous, requiring more effort to ensure certain outcomes compared to messaging systems.

7. RPCs, Databases, and File Sharing: The speaker briefly mentions other integration options such as Remote Procedure Calls (RPCs), shared databases, and file sharing. While these methods can be used for integration, they come with limitations like platform dependence, lack of features, or low-tech approaches.

8. Data Mashing: This involves creating a catalog of data products that can be analyzed to make better decisions. It is particularly useful when integrating data for analysis purposes but may not be the best general solution for system integration.

Executive Summary: The Transcript eines Youtube Videos delves into various aspects of software system integration, discussing different types of integrations, the role of Enterprise Service Buses, messaging systems like Kafka, RESTful APIs, and other alternatives like RPCs, databases, file sharing, and data mashing. It emphasizes the importance of loose coupling between systems to avoid failures and maintain availability while considering social communications among teams involved in integration processes.

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## I ported THOUSANDS of apps to Windows 95 (Video):

The transcript of the YouTube video is a detailed exploration of the process of backporting Microsoft's .NET framework to Windows 95. The speaker shares their journey, including the challenges and solutions they encountered along the way. Here are the key topics discussed in the video:

- 1. Introduction to Windows 95 and its impact on home computing:** The speaker begins by discussing the significance of Windows 95 as a milestone in home computing. It was user-friendly, affordable, and set the stage for future operating systems.
- 2. Why backport .NET to Windows 95?:** The speaker explains their personal motivation behind attempting to backport .NET to Windows 95. They grew up with computers during this era and were inspired by the possibilities of creating and connecting through technology.
- 3. The challenge of backporting .NET to Windows 95:** The speaker outlines the main obstacles they faced in trying to run .NET on Windows 95. These included missing system calls, incompatible Unicode standards, and a lack of support for certain hardware instructions.
- 4. Dealing with exceptions and unhandled errors:** The speaker discusses how they used debugging tools like Windybug and dnspy to identify and resolve various exceptions that occurred when interacting with the user interface or calling system functions not supported by Windows 95.
- 5. The role of decompiling in backporting:** The speaker explains the process of decompiling C# code to understand how .NET works, which was essential for making necessary modifications. They also discuss the use of tools like Orca for editing MSI files and scripts for automating tasks.
- 6. The final result and future possibilities:** After overcoming all the challenges, the speaker successfully backported .NET to Windows 95, extending its compatibility to version 3.5. The video concludes with a reflection on the importance of software preservation and how modern technologies can enhance our experience with older systems.



**Executive Summary:** The YouTube video is an engaging account of the process of backporting Microsoft's .NET framework to Windows 95. It highlights the technical challenges faced, the tools used for debugging and decompiling, and the personal motivation behind the project. The speaker emphasizes the importance of software preservation and how modern technologies can help in keeping old systems alive and relevant.

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### **Magnificent Ancient Kings – The Únětice Culture (Video):**

The transcript discusses the Únětice culture, which was the most influential society at the heart of early Bronze Age Europe. This society developed from the merging of the Bell Beaker and Corded Ware cultures around 2200 BC. They controlled fertile plains, valleys, highlands, mountains, and produced enormous quantities of copper and tin. The Únětice culture created wonders like the Nebra Skydisk, which was called the oldest depiction of astronomical phenomena in the world. Their social hierarchies were detectable through archaeology, and they had state-like societies with standardized ritual expressions and institutions like standing armies, centralized grain production, and elaborate burial mounds for their rulers. The Únětice culture was influential on later Bronze Age and Iron Age societies of Europe and played a crucial role in trade routes across the continent.

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### **Does “Every Little Thing” REALLY Stop Climate Change? (Video):**

The transcript discusses the limitations of individual actions to combat climate change and environmental crises, emphasizing that small changes do not significantly impact the global issue. It highlights that the wealthiest 1% contribute more than twice as much emissions compared to the poorest 50%, and that our personal choices are overshadowed by complex systems and decisions made by large corporations and governments.

The discussion then shifts toward how the „do-anything“ approach allows for continued inaction from major polluters, such as ExxonMobil, which invests in climate initiatives while maintaining business as usual through fossil fuel extraction and lobbying against climate regulations. This convenient solution is more focused on political agreements rather than substantial changes to the economy and infrastructure necessary for a meaningful impact.

The United Nations' climate conferences, such as the Paris Climate Agreement, have not been sufficient in limiting temperature increases, with countries failing to meet their commitments and falling short of the 1.5-degree goal. The Glasgow conference faced disappointment from lack of progress on phasing out coal.

The video concludes by arguing that personal choices alone are insufficient to save the planet; rather, changes must be made in energy sources and sustainable practices at a larger scale.

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### **How Executives Get Rich Making Poor Decisions – Cold Take (Video):**

The video discusses the challenges faced by the gaming industry, specifically focusing on corporate decisions made to maximize profits. Key points include:

1. Kotaku was instructed by Geo Media to swap out opinion pieces for 50 video game guides per

week, leading to concerns about the site's quality and direction.

2. Several gaming studios have been forced to shift their focus from creating innovative games to making live service looter shooter games due to market pressures and high stakes in the industry.
3. The gaming industry has seen a trend of companies prioritizing profits over quality, leading to potential backlash and disappointment among fans.
4. Examples of companies facing issues include Embracer Group, which has been accused of using investor money and loans to purchase multiple studios without considering the long-term impact on their products.
5. Ubisoft's Skull & Bones is criticized for being a project that was essentially already made 10 years ago but took additional time and resources to complete, ultimately costing around \$200 million.
6. The video highlights the potential consequences of corporate decisions in the gaming industry on employees, fans, and overall quality of games. It calls for more focus on creating quality games and maintaining a healthy balance between profits and creativity.

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### **Warum Rechtspopulisten auf TikTok durchstarten ARTE Europa - Die Woche (Video):**

The Transcript of the YouTube video discusses the role of TikTok in politics, particularly in attracting right-wing politicians and their successful strategies for gaining followers and support among young people. Key points include:

1. TikTok is an effective platform for politicians to reach a younger audience and engage with them through humor, catchy music, emojis, and sarcasm. This allows right-wing political figures to communicate their messages without direct confrontation or fact-checking.
2. The far-right in Europe has successfully used TikTok to gain popularity and support. Examples include Jordan Bardella of the National Rally party in France, who gained over a million followers on TikTok within three years.
3. In Portugal, the Chega party emerged as a winner during the last election due to their TikTok videos and provocative actions that went viral quickly.
4. The right-wing parties post more content on TikTok than other EU politicians and receive significantly higher engagement through likes and comments. This is expected to result in gains for the right-wing parties during the upcoming European elections.
5. Moderate parties need to adapt their strategies and appeal to young voters by utilizing social media platforms like TikTok, where potential voters are prevalent.

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### **Aaron Patterson - Future of Developer Acceleration with Rails - Rails World 2023 (Video):**

The transcript of the YouTube video presents several topics related to programming and software development. Here's a summary of each topic along with key points, arguments, facts, names, and technical terms:

#### **1. Introduction (0-2 minutes)**

1. The speaker begins by performing a magic trick transforming water into more water.
2. They introduce themselves as Aaron Patterson, also known as Tenderlove, a code comedian who is delivering the final keynote at Rails World in Amsterdam.
3. They express relief after completing their talk and anticipation to enjoy the rest of the

conference.

## 2. Personal Experience with Ruby and Rails (2-4 minutes)

1. The speaker shares their love for Ruby because it allows them to code creatively and efficiently, comparing Java code snippets to equivalent Ruby code.
2. They express admiration for Rails, noting its ability to take many decisions away from developers, such as the choice of test frameworks, ORM, and folder structure.

## 3. Performance (4-8 minutes)

1. The speaker discusses performance in web applications, stating that both Ruby and Rails are highly optimized but for different purposes: Ruby is optimized for general purpose programming, while Rails is optimized for writing web applications quickly.
2. They argue against the common belief of rewriting code in C or Rust to improve performance, instead advocating for using JIT compilers and focusing on holistic approaches like optimizing algorithms and setting expectations.
3. The speaker introduces Vernier, a next-generation CRuby profiler developed with John Hawthorne, which provides insights into application behavior through flame graphs and call trees.

## 4. Writing Fast Applications (8-12 minutes)

1. The speaker discusses profiling tools as essential for exploring large code bases, specifically mentioning the use of sampling profilers like Vernier.
2. They provide a simple example of how these profilers work by tracing the execution of a slow program and generating a flame graph from it.
3. The speaker demonstrates how to use Vernier with Rails applications, showcasing its features such as custom markers, GC information, thread support, and the ability to profile multiple threads simultaneously.

## 5. Writing Apps Fast (12-18 minutes)

1. The speaker transitions to discussing language servers, which are programs that communicate with editors over a common protocol like the Language Server Protocol (LSP).
2. They build a simple language server in Ruby using LSP and demonstrate its functionality within Vim by checking syntax errors on saved files.
3. The speaker then introduces Refreshing, a prototype language server for Rails, which provides features such as hover information, jump to definition, automatic refreshing, and error highlighting.

## 6. Integration with Rails (18-23 minutes)

1. The speaker explains the process of integrating the language server into a running Rails application in development mode.
2. They discuss how the language server retrieves information about Active Record attributes, URL helpers, helper definitions, and error messages using various techniques like reading file contents, checking named routes, and monkey patching Rails.
3. The speaker acknowledges the complexity of these methods but emphasizes their effectiveness in providing valuable features for developers.

## 7. Conclusion (23-26 minutes)

1. The speaker encourages the adoption of language servers in development environments to improve productivity and suggests that Rails should include a language server out of the box.
2. They wrap up the presentation by emphasizing the importance of building fast apps, building apps fast, using Ruby and Rails, and enabling widget for performance improvements.

Executive Summary: The transcript covers various aspects of programming and software development, focusing on performance optimization, writing fast applications, and leveraging language servers to enhance productivity in web development. The speaker shares their experience with Ruby and Rails, arguing against the common practice of rewriting code in lower-level languages for performance improvements. They introduce Vernier as a profiling tool and Refreshing as a prototype language server for Rails, demonstrating how these tools can be integrated into the development process to streamline coding and debugging tasks. The speaker concludes by advocating for the widespread adoption of language servers and suggests that Rails should include one out of the box to simplify the experience for developers.

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### **Medizinische Versorgungszentren - lukrative Investition zu Lasten von Patienten** **Plusminus SWR (Video):**

1. The Altdorf case: A town faced the sudden lack of general practitioners as two experienced doctors retired and sold their practice to a new doctor who took over both cash registers, leading to claims that the service was limited or even nonexistent. The selling doctors were part of a medical services company that converted the practice into an outpatient clinic with employed physicians.
2. Legal disputes: After the changes, patients reported being asked to find new doctors. The medical services company claimed it had to close due to safety threats against its employees and relocated to another existing site. Some patients filed lawsuits as they felt misled by the company's claims of better service quality.
3. Market concentration: Experts like Lena Oberloher noted that a growing number of medical investors are active in the market, making it difficult for young doctors to establish their own practices amidst large-scale players with significant financial backing and influence.
4. Unfair competition: Critics argue that the current system benefits those with the most capital, allowing them to outbid individual practitioners or prolong negotiations until regular people give up. This also affects local Kassenärztlichen Vereinigungen, which have limited options when dealing with large medical service providers in their area.
5. Quality concerns: Medical supply centers were originally intended to improve patient care but are now criticized for potentially leading to a decline in quality due to the dominance of larger providers and reduced competition among practitioners.

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### **Gesund ohne OP** **ARTE Re** **(Video):**

The Youtube video discusses the problems within the healthcare system such as high costs, overcrowded hospitals, unnecessary operations, and limited time for doctors to spend with patients. Dr. Arne Björnjägar develops an alternative movement therapy to avoid unnecessary surgeries and improve the patient's quality of life. Another example is a new Kaltplasma treatment that helps in healing chronic wounds without amputation. Friedemann Geiger introduces Shared Decision Making, a

concept where doctors and patients make decisions together to determine whether an operation is necessary or not. This approach has shown better patient outcomes and reduced costs for the healthcare system overall.

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### **Forschung, Fake und faule Tricks □ Doku HD Reupload □ ARTE (Video):**

The Transcript eines Youtube Videos discusses the manipulation of scientific research by various industries to serve their interests. The video begins by introducing the problem of Bienensterben (bee decline) and how it has been linked to the use of certain pesticides, particularly neonicotinoids. It then delves into the history of scientific misinformation, using the tobacco industry as a case study.

The video explains how the tobacco industry systematically funded research to cast doubt on the health risks associated with smoking. They used tactics such as promoting alternative causes for diseases and funding studies that would create confusion rather than provide clear answers. This strategy was later adopted by other industries, including those in agriculture, pharmaceuticals, and energy.

The video also touches on the concept of agnotology, which is the study of ignorance or the deliberate creation of uncertainty about scientific facts. It discusses how this phenomenon can be used to protect corporate interests at the expense of public health and the environment.

In addition, the video explores the issue of Bisphenol A (BPA), a chemical found in many plastic products. Despite evidence linking it to health problems, the industry has been successful in casting doubt on its harmful effects by manipulating research results.

The video also highlights how the asbestos industry manipulated public opinion through the creation of a false debate about the safety of asbestos. They did this by promoting the concept of „junk science“ and creating an illusion of wide support for their views.

Finally, the video discusses the role of social media in spreading misinformation and creating echo chambers. It uses the example of climate change skeptics who use these platforms to promote their views and counter scientific consensus.

The executive summary is that the video exposes the systematic manipulation of scientific research by various industries for their own benefit. It highlights the importance of critical thinking and understanding how scientific misinformation is created and spread. The video calls for a stronger protection of independent, evidence-based science to ensure public health and environmental safety.

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### **Das riskante Spiel deutscher Autobosse in China □ DW Nachrichten (Video):**

1. The German automotive industry's struggle on the Chinese market: Once the largest auto-consuming market globally, China has evolved into a leading manufacturing powerhouse. Germany and its companies have been forced to adapt to this change, with Volkswagen being one of the main actors in helping develop China's automotive sector. However, these changes have made the Chinese market increasingly risky for German businesses. 2. China's use of economic interests as a weapon: The country has started using its widening influence to pressure international partners by leveraging their economic interests. This political shift is having significant consequences for Germany's auto manufacturers, who have long ignored the associated risks and challenges. 3. German automotive

industry's past success in China: For decades, German automakers dominated the Chinese market, with Volkswagen being one of the first to establish a joint venture in Shanghai in 1983. This allowed them to shape the local auto industry and become its biggest customer. 4. The shift towards electric vehicles (EVs) in China: As China has moved away from traditional combustion engine-powered cars towards EVs, German automakers have faced increased competition. Their market share in China's EV sector is now less than 5%, compared to around 20% for conventional cars. 5. The future of the German auto industry and its dependence on China: To stay competitive globally, Germany must redefine itself and cannot rely solely on the Chinese market. However, as one of the world's most advanced EV markets, China represents significant potential growth for German automakers. 6. Challenges faced by German carmakers in China: German auto companies must better understand the needs of Chinese consumers and adapt their products accordingly to stay ahead in this rapidly evolving market. For instance, many cars from Germany lack entertainment features popular among younger Chinese consumers. 7. The risks associated with increasing dependence on China for technology and innovation: As Chinese companies continue to advance in EV-related technologies such as batteries and autonomous driving, German auto manufacturers must adapt or risk losing their competitive edge. 8. Investment strategies of German automakers in China: Companies like Volkswagen, Mercedes, and BMW have invested over 5 billion euros to establish joint ventures with Chinese partners in areas such as battery production and autonomous driving technology. This growing dependence on the Chinese market highlights the risks associated with relying solely on it for success. 9. The relationship between German and Chinese automakers: Both countries have benefited from their mutual cooperation, but tensions are increasing due to economic and political differences. Balancing this delicate relationship will be crucial for the future of both industries. 10. The risks associated with investing in China's auto industry: While Chinese market growth is attractive, German automakers face several challenges, including economic uncertainty, geopolitical tensions, and potential competition from Chinese companies. This has led some European automakers to consider withdrawing from the Chinese market altogether. 11. The future of the global auto industry in China: As electric vehicles become increasingly popular worldwide, the competitive landscape will likely change dramatically over the next decade. German automakers must adapt and innovate if they want to stay relevant in an ever-evolving market.

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### **WARNING🚫 If You're Looking For a New Job in 2024 Watch This First (Video):**

The video discusses the growing trend of companies posting fake job openings, known as ghost jobs or phantom jobs, which do not really exist or have no intention of being filled. Companies use this tactic for various reasons such as: 1) to keep overworked employees from complaining about their workload by promising help is on the way, 2) to maintain a pool of candidates readily available when hiring actually takes place, 3) for appearances to create an impression of company growth, and 4) to avoid paying for new hires. The video also cautions job seekers against believing propaganda about job availability, advises them not to get discouraged, and suggests that they should be aware of common red flags indicating a ghost job posting.

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### **America and China fight for mineral monopoly (Video):**

The transcript discusses the importance of critical minerals in modern society and how Africa has 30% of the world's known critical mineral resources. China dominates the global extraction, refining, and processing of these mineral resources; however, America is developing a comeback strategy to recapture a stake in Africa's minerals market by reviving the Lobito Corridor railway. The Mineral Belt,

stretching from the Democratic Republic of Congo to South Africa, has high-grade quality and infrastructure for exporting resources. America seeks to create a value chain that will not only export critical minerals but also foster business development and commercial activities in Africa. In comparison, China is currently going through an economic slump and may consider turning the Tazara railway into a value chain in its own right. African nations may prefer to leverage American interests against those of the Chinese or vice versa, hedging their positions to get the best deals possible from either side.

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### Dein Job ist nutzlos (Video):

The video discusses the prevalence of „Bullshit Jobs“ (BS-Jobs), which are defined as jobs that do not contribute anything to society or the company but exist solely for employment purposes. According to David Graeber, an American anthropologist and author of a book called BS-Jobs, one in three people have no interest in their work, and many jobs are unnecessary or even harmful. The video presents several categories of Bullshit Jobs:

1. Flankies - people who are hired to make someone else look important or competent.
2. Goons - individuals whose job is to cause harm, either mentally, physically, or psychologically.
3. Ducktapers - responsible for correcting mistakes or repairing damage caused by others.
4. Boxstickers - people who create reports and presentations that look good but do not actually solve any problems.
5. Taskmasters - individuals in middle management who assign tasks to those who should not be managed at all.

The video also touches on the issue of system-relevant jobs, which are essential for society but often poorly paid and undervalued. The presenter argues that neoliberalism is responsible for creating these problems, as it prioritizes profits over people and leads to a lack of respect in the workforce. To address this issue, he suggests redistributing wealth and appreciation within the value chain, so that system-relevant jobs are properly valued and rewarded.

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