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FREE ADVICE

PROTECT AGAINST CYBER ATTACKS

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LOCK YOUR PHONE

AVOID PHISHING

USE ANTIVIRUS

VISIT ONLY TRUSTED WEBSITE

CHECK YOUR PRIVACY SETTINGS
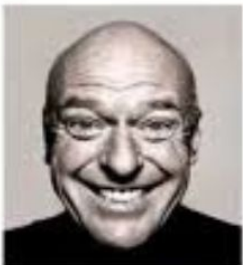
People who are into Cybersecurity

People who do Cybersecurity

JUST FOR FUN

MESSAGE

"A computer is like a violin."
You can imagine it making beautiful music, but you have to learn how to play it
Bill Gates

SPATIAL COMPUTUNG

Spatial computing is a broad paradigm that integrates digital information with our physical world, enabling interactions with technology in a way that feels both natural and immersive. Rather than confining digital content to flat computer screens, spatial computing overlays or embeds it within our three-dimensional environment. This means that our devices not only understand digital commands but also sense, map, and react to the space around us.
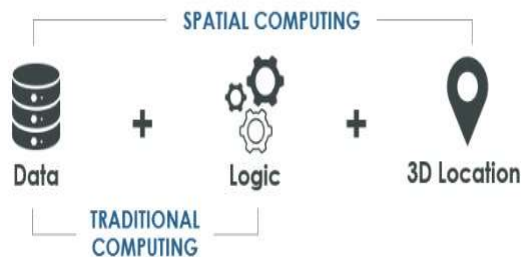
At its core, spatial computing uses a variety of sensors—such as RGB and depth cameras, inertial measurement units (IMUs), and 3D trackers—to capture details about our surroundings. Computer vision algorithms interpret these sensory inputs, allowing devices to create digital models of physical spaces. These models can then serve as the basis for overlaying information or creating interactive virtual elements. Whether you're using augmented reality (AR) to see digital graphics superimposed

on the real world, virtual reality (VR) to immerse yourself in entirely digital environments, or mixed reality (MR) to

blend both, spatial computing provides the technical foundation behind these experiences

TRADITIONAL COMPUTING V/S SPATIAL COMPUTING

Traditional computing works with data and logic. There is no scope for 3D location in traditional computing

But spatial computing uses 3D location to Identify the digital object which is being executed by the computer processor.

The evolution of spatial computing has roots in geographic information systems (GIS) from the 1980s, where large-scale spatial data processing was key. However, its modern incarnation is focused on human-scale interactions—often working within spaces like living rooms or office environments. By combining technologies such as machine learning, sensor fusion, spatial mapping, and even haptic feedback, spatial computing enables systems that not only display digital content but also understand context and adapt in real time. For instance, in a "smart building," sensors and spatial computing can work together to monitor occupancy and adjust lighting or temperature, optimizing energy usage seamlessly

DEVICES USED FOR SPATIAL COMPUTING

AR Glasses

Augmented Reality Glasses are wearable AR devices that are worn like regular

glasses and merge virtual information with physical information in a user's view field.

AR glasses in the market are Google, Kopin, Toshiba, Vuzix. Epson, EverySite and much more

Beyond these fundamentals, spatial computing is also being explored in diverse applications such as immersive educational tools, interactive art installations, and even advanced simulations for training and design. The interplay between physical space and digital data introduces not only technical challenges but also important discussions on privacy and ethics, as these systems often collect highly detailed personal and environmental data. As you look to the future, you might consider how these emerging trends could impact industries you're passionate about or even your own projects—perhaps exploring new methods for integrating spatial awareness into user-centric designs or dynamic interfaces.

TECHNOLOGIES USED IN SPATIAL COMPUTING

GPS

Real-time location tracking with GPS satellites

Artificial Intelligence

Artificial intelligence (Al) is a wide-ranging branch of computer science concerned with building smart machines capable of performing tasks that typically require human intelligence.

Internet Of Things

Real-time location tracking with GPS satellites

EXAMPLES OF SPATIAL COMPUTING

A mixed reality headset that overlays a repair manual to guide the technician.

A network of cameras that automatically models a car production process.

A spatial computing analytics program that coaches employees on how to reduce harmful movements.

A spatial model of the production process that lets managers simulate variations to optimize the process.

Occupancy analytics programs that automate elderly safety checks for relatives and caregivers.

Ambient Invisible Intelligence

The globe is slowly going towards a future where technology recedes into the background—intelligent, omnipresent, and unseen. This is referred to as Ambient Invisible Intelligence. It is the invisible and seamless fusion of smart systems and AI into the surroundings that works silently in the background to smooth out our lives, make them safer and smarter.

Real-world Applications

Picture yourself entering your house and without uttering a single word, the lights are set according to your mood, the temperature is within your threshold, and there is a gentle tune playing in the background—your likes detected and matched automatically. This is not a fantasy scenario—it's ambient intelligence in action.

In hospitals, sensors monitor patient vitals in real-time without invasive devices. In smart cities, traffic is managed more efficiently with intelligent sensors that are integrated into roads and traffic lights. Retailers apply ambient intelligence to offer customized shopping experiences, and offices optimize lighting and air quality with real-time data on occupancy.

Benefits and Concerns

Ambient invisible intelligence is beautiful in its non-intrusive nature. It saves decision fatigue, boosts efficiency, and provides hyper-personalized experiences without needing perpetual user engagement. Yet, such an invisible construct of technology carries with it the most important issues—particularly over data privacy, surveillance,

and moral use of AI. Since such systems gather and analyze enormous amounts of data, transparency and confidence become paramount.

Future Scope

The future is full of promise for ambient intelligence. As machines become more intelligent and interconnected by the Internet of Things (IoT), we can anticipate that homes, schools, transportation, and workplaces will be even more responsive. Technologies such as edge computing and 6G will enhance these functions even further, making real-time responses with minimal latency possible.

In education, AI-based systems may learn to tailor content presentation to the pace and style of every student. In agriculture, sensors may silently track soil conditions and forecast crop yields. The potential is limitless—but only if innovation is balanced with responsibility.

Conclusion

Ambient Invisible Intelligence isn't merely about intelligent devices—it's about designing an ambience where technology knows us without saying and acts for us intuitively. As innovators, developers, and thinkers of the future, it's our responsibility to design systems that not only act intelligently but also value and protect people. Let's innovate responsibly, and create a world where intelligence becomes invisible part of the web of everyday life.

Technologies Powering Ambient Intelligence

Ambient Invisible Intelligence is enabled by the intersection of various cutting-edge technologies. These are artificial intelligence, machine learning, sensor networks, Internet of Things (IoT), edge computing, and cloud infrastructure. Collectively, these enable devices to gather data, understand context, and act in real time without human intervention.

For example, computer vision and natural language processing permit systems to read human gestures and speech. Wearable devices and biometric sensors enable passive, accurate health monitoring. Edge computing guarantees data to be processed on the local environment, allowing quick responses and decreased central server burden.

Social and Ethical Considerations

As ambient intelligence seeps into the fabric of everyday life, there are ethical questions that become increasingly relevant. Too much information is too much? Who has the right to data being gathered? Are we losing too much privacy in the process of being convenient? These need to be solved through good design, policy-making, and public debate.

Another most important concern is algorithmic bias. If biased data sets are used for training AI systems analyzing ambient data, they can unintentionally commit existing biases. Policymakers and developers have to work hand-in-hand in making ambient systems fair, accountable, and inclusive.

Case Studies and Examples

1. Smart Homes – Google, Amazon, and Apple have built ecosystems in which smart assistants (such as Alexa or Google Assistant) interface with lights, thermostats, and security systems. Smart homes learn about people's habits and automate and optimize routines accordingly.

2. Healthcare – Ambient sensors in assisted living facilities can sense falls, track heart rates, and confirm medication adherence—all without interrupting the patient.

3. Workspaces – Smart offices utilize occupancy sensors to optimize lighting and temperature, boosting productivity while conserving energy.

4. Retail – Ambient systems powered by artificial intelligence monitor customer movement and interaction within stores to enhance store layout design and tailor advertising.

A Call to Young Innovators

As young students and future technologists, we are at the forefront of this revolution. The future of ambient intelligence is not only in the research labs of large tech firms, but also in the minds of young engineers, designers, and visionaries. Whether through college projects, hackathons, or startups, your thoughts may determine how humanity engages with invisible technology.

Post Quantum Cryptography
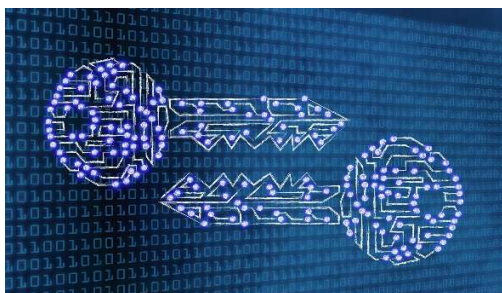
The rapid evolution of quantum computing stands poised to upend the very fabric of modern cryptography. Traditional encryption systems such as RSA and elliptic curve cryptography (ECC), which underpin much of today's secure communications, hinge on mathematical problems that quantum computers can potentially solve with ease. In contrast, post quantum cryptography (PQC) seeks to develop cryptographic algorithms that remain secure even in a world dominated by quantum processors. This emerging field is essential to protecting sensitive data and ensuring the integrity of digital communications as we navigate an increasingly connected and computationally powerful era.

The Quantum Threat to Classical Cryptography

At the heart of conventional public-key cryptosystems lies the assumption that certain mathematical problems—like factoring large composite numbers or computing discrete logarithms—are computationally infeasible for classical computers. However, quantum algorithms such as Shor's algorithm promise a significant reduction in the complexity of these problems. In effect, a sufficiently

advanced quantum computer could break these cryptosystems almost instantaneously, exposing confidential information, undermining secure communications, and subverting digital trust. The recognition of these vulnerabilities has provided a strong impetus for the research and development of quantum-resistant solutions that can stand up to the might of quantum computation.

Core Principles and Approaches in PQC

Post quantum cryptography encompasses a variety of approaches, each leveraging different mathematical problems believed to be resistant to quantum attacks. Among these, **lattice-based cryptography** is one of the most promising. It relies on the difficulty of problems such as the Shortest Vector Problem (SVP), which remain computationally hard even for quantum machines. Similarly, **code-based cryptography** builds on error-correcting codes, another class of problems for which efficient quantum solutions have not yet been discovered.

Other innovative methods include **hash-based cryptography**, which primarily uses the proven security of cryptographic hash functions to develop digital signatures, and **multivariate polynomial cryptography**, which exploits the fact that solving systems of multivariate polynomial equations over finite fields poses a significant challenge to quantum algorithms. Additionally, **isogeny-based cryptography** has emerged as a fascinating approach that takes advantage of the complex interactions between elliptic

curves, offering another pathway to quantum resistance. Each of these methods brings its own balance of performance, key size, and computational complexity, underlining the significant trade-offs involved in designing secure and practical quantum-resistant protocols.

Challenges in the Adoption of PQC

Despite the theoretical promise of these approaches, several challenges must be addressed before post quantum cryptography can be widely adopted. One of the primary concerns is the increased key and signature sizes that many quantum-resistant schemes require. Larger keys can have an impact on system performance, data storage, and transmission speeds, notably affecting devices with limited resources.

Moreover, the transition from classical to quantum-resistant algorithms involves extensive standardization and rigorous testing. Organizations like the National Institute of Standards and Technology (NIST) are in the process of evaluating multiple candidates through open competitions and collaborative research initiatives. The goal is to ensure that the new protocols not only resist quantum attacks but also integrate seamlessly with existing systems. This transitional phase is critical, as any implemented solution must be resilient against both current cryptographic attacks and those posed by future quantum technologies.

Looking to the Future

As quantum computing technology continues to advance, the delay between theoretical breakthroughs and practical threats narrows. This urgency has spurred a global research effort, unifying experts in computer science, mathematics, and engineering to create and refine post quantum cryptographic standards. While the full-scale deployment of quantum computers capable of breaking existing systems may still be years away, proactive adaptation is essential. Research in PQC is not simply a defensive measure but also a pathway to innovation, prompting the rethinking of traditional cryptographic principles and driving the development of novel algorithms.

Looking forward, the integration of PQC into real-world systems will impact industries ranging from financial services and government sectors to healthcare and critical infrastructure. This shift holds the promise of a more secure digital landscape—one that is robust against the technological disruptions introduced by quantum computing. As organizations prepare for this future, the ongoing dialogue between researchers, security professionals, and policymakers will be crucial in striking the right balance between innovation, usability, and security.

Conclusion

As researchers continue to innovate, we stand on the brink of a new frontier in cybersecurity—one that promises to transform our digital landscape and inspire future generations to think beyond traditional boundaries.

Polyfunctional Robots

Polyfunctional Robots: Expanding the Horizons of Automation: In today's rapidly evolving technological landscape, robotics is shifting from single-purpose machines to versatile systems capable of handling a variety of tasks. Polyfunctional robots—sometimes referred to as multifunctional robots—are emerging as the next frontier in automation. Unlike traditional robots that are tailored for specific tasks, these adaptable machines are designed to perform multiple functions, seamlessly transitioning between roles depending on the environment and operational demands. This evolution is driven by innovations in artificial intelligence (AI), machine learning, advanced sensors, and improved robotics software, all converging to create machines that can learn and adapt without constant reprogramming

What Are Polyfunctional Robots?

Polyfunctional robots represent a significant departure from the assembly-line robots of the past. Their distinctive advantage lies in their ability to execute a wide range of tasks that typically require multiple specialized machines. These robots are equipped with an array of sensors and actuators, enabling them to perceive and interact with their surroundings in a human-like way. For instance, a single robot may perform assembly, quality inspection, and packaging operations, switching between functions as production demands change. This flexibility not only maximizes the utility of each unit but also offers a faster return on investment and a more adaptable workforce—which is especially significant in industries facing rapid shifts in production needs

Key Enabling Technologies

Several cutting-edge technologies underpin the development of polyfunctional robots:

- **Artificial Intelligence and Machine Learning:** These are the backbone of smart automation. AI algorithms allow robots to analyze large volumes of data, recognize patterns, and make informed decisions in real time. Through continuous learning, these systems improve their performance, adapting to new tasks without the need for extensive reprogramming.

- **Advanced Sensor Technologies:** Polyfunctional robots rely on a suite of sensors—such as vision systems, tactile sensors, and environmental detectors—to interact with their surroundings accurately. This sensory input is crucial for the robots to navigate complex, dynamic environments.

- **Robotics Software and Systems Integration:** Modern robotics software enables integration of diverse functionalities into a single platform, managing everything from motion control and task scheduling to safety protocols and human-robot collaboration. This integration is key to ensuring that one machine can effectively operate in multiple roles without performance degradation

Applications and Impact on Industries

The flexibility of polyfunctional robots opens up new possibilities in various sectors:

- **Manufacturing:** In factories, these robots can transition seamlessly between tasks such as assembly, welding, and packaging. This adaptability reduces downtime and allows production lines to adjust quickly to changes in product design or volume, ultimately boosting efficiency and reducing costs.

- **Healthcare:** In hospitals, multifunctional robots can assist with tasks ranging from logistics (transporting medical supplies) to direct patient care (monitoring vital signs or assisting in surgeries), thereby improving operational efficiency and patient outcomes.

- **Service Industries:** In environments that require close human-robot collaboration—such as retail or hospitality—polyfunctional robots can adapt to various roles, contribute

to customer service, and support staff by handling repetitive or physically demanding tasks.

- **Logistics and Warehousing:** The dynamic nature of modern supply chains benefits greatly from robots that can switch between sorting, packaging, and inventory management tasks, ensuring faster and more accurate order fulfillment

- # Challenges and Future Perspectives
- Despite their promising capabilities, polyfunctional robots also present challenges. One major concern is the complexity involved in designing systems robust enough for multi-tasking without sacrificing performance. Integrating varied functionalities often leads to increased computational and mechanical demands, which can affect response time and overall reliability. There are also safety considerations, especially as these machines operate alongside human workers in unstructured environments.
- Looking forward, the evolution of polyfunctional robots will likely be driven by further advancements in AI and sensor technologies, as well as improvements in system integration. As standardization efforts progress, these robots are poised to become a cornerstone in industries looking to maximize automation while maintaining the flexibility to adapt to new challenges.

The Metaverse Beyond Gaming: Transforming Reality

The metaverse was once synonymous with immersive gaming worlds—a digital playground for enthusiasts and early adopters. Today, however, it has blossomed into a comprehensive ecosystem that touches virtually every aspect of modern life. With rapid advancements in augmented reality (AR), virtual reality (VR), blockchain, and artificial intelligence (AI), the metaverse is morphing from a niche entertainment venue into a powerful platform for work, education, healthcare, and social interaction

Bridging the Physical and Digital Worlds:

In its transformed state, the metaverse acts as a bridge between the physical and digital realms. Instead of being confined to two-dimensional screens, immersive technologies now enable users to interact within three-dimensional spaces where digital assets, human avatars, and physical realities coexist. This convergence allows for experiences that go far beyond gaming. For example, users can participate in virtual conferences, recreate real-world office settings, and even explore digital replicas of actual cities—all while maintaining the tactile and social cues of genuine human interaction.

Real-World Applications Across Industries

Education and Training

In the realm of education, virtual classrooms and digital campuses are now becoming commonplace. By leveraging immersive environments, educators can transform traditional lectures into interactive, experiential learning opportunities. Students can traverse historical sites, perform virtual laboratory experiments, or explore complex scientific phenomena up close—all from within the metaverse. Such applications break geographical barriers and make education more engaging and accessible on a global scale.

Remote Work and Virtual Collaboration

The evolution of remote work has been dramatically accelerated by the metaverse. As companies adapt to distributed teams, virtual offices provide dynamic, interactive workspaces that emulate—and sometimes enhance—the nuance of face-to-face

collaboration. Virtual meeting rooms, shared digital whiteboards, and lifelike avatars enable real-time cooperation, fostering creativity and innovation in contexts where traditional video conferencing falls short. This new mode of collaboration not only boosts productivity but also helps recreate the organic energy of physical offices.

Healthcare and Therapeutic Innovations

Healthcare is one of the most promising frontiers for metaverse applications. Health professionals are venturing into digital spaces to offer remote consultations, conduct virtual surgeries, and provide immersive therapy sessions. These applications can significantly improve access to quality care, particularly in remote or underserved areas. The metaverse also opens up opportunities for detailed medical training and simulation, offering a controlled yet realistic environment in which practitioners can refine their skills.

Commerce, Social Interaction, and Beyond

Retail and commerce have found new expression within the metaverse. Virtual storefronts allow customers to experience products through interactive 3D previews before purchasing, blurring the lines between online shopping and physical retail experiences. Social platforms within the metaverse enable deeper forms of community engagement where users can attend concerts, art exhibitions, or collaborative events, transcending the limitations of physical proximity. This ecosystem nurtures novel business models and shifts consumption habits while also raising important questions about digital ownership and privacy.

Challenges on the Horizon

Despite its transformative potential, the metaverse also introduces a host of challenges. Interoperability remains a pressing concern; for the metaverse to realize its promise, various platforms must be able to communicate and exchange digital assets seamlessly. Security and privacy issues are equally critical, as the immersive nature of these environments necessitates the collection of extensive personal and environmental data. Moreover, the technological and infrastructural demands call for significant investments in hardware, software, and network infrastructure to ensure smooth and inclusive user experiences.

Standardization efforts, regulatory frameworks, and cross-industry collaborations will be crucial to address these concerns. Policymakers, technologists, and business leaders must work together to create systems that safeguard user rights while fostering innovation—a balance that is vital for sustainable growth in this rapidly evolving landscape

As the metaverse evolves beyond gaming, blockchain technology is playing a transformative role in redefining digital asset ownership and identity, enabling users to securely own, trade, and monetize virtual assets through NFTs and decentralized platforms. This not only empowers creators and consumers with true digital ownership but also fosters a trust-based virtual economy. At the same time, virtual collaboration tools are revolutionizing remote work by offering immersive environments where teams can interact using avatars, share 3D spaces, and co-create in real-time, making digital workplaces more dynamic and engaging. Together, these innovations are reshaping how we live, work, and connect in increasingly hybrid digital-physical realities.

Building on this momentum, the integration of blockchain in the metaverse also ensures transparency, security, and immutability—critical elements for fostering trust in virtual transactions and digital identities. Smart contracts automate agreements, eliminating the need for intermediaries and enabling seamless interactions within decentralized virtual economies. Meanwhile, advancements in virtual collaboration tools are breaking geographical barriers, allowing global teams to engage in lifelike meetings, brainstorm on interactive whiteboards, and simulate real-world workflows. These tools not only boost productivity but also nurture creativity and emotional connection in remote settings. As blockchain and immersive collaboration converge, they pave the way for decentralized autonomous organizations (DAOs) and borderless companies to operate entirely within the metaverse, signaling a profound shift in how we perceive ownership, work, and social interaction in a digitally augmented world.

Conclusion The evolution of the metaverse beyond gaming signifies a pivotal shift in how we interact with technology. No longer confined to digital leisure or escapism, the metaverse is emerging as an essential platform for everyday activities—from collaborative work and immersive education to advanced healthcare and innovative commerce. As our virtual and physical worlds continue to intertwine, the

opportunities for enhanced human connection and improved quality of life are immense. Yet, realizing this potential will require overcoming technical, social, and regulatory challenges—a task that calls for collective effort and visionary thinking.

The journey into this new digital frontier is just beginning, and with continued collaboration and innovation, the metaverse promises to redefine our experience of reality. Would you like to explore further how blockchain technology is reshaping digital asset ownership in the metaverse, or delve into the specific ways virtual collaboration tools are revolutionizing remote work.

The Ethics of AI-Powered Creativity

Artificial intelligence is transforming creative processes across art, literature, music, and design. AI-powered creativity tools, such as generative adversarial networks (GANs) and language models, empower users to produce novel works at unprecedented speed and scale. However, as these technologies blur the boundaries between human originality and algorithmic pattern recognition, they also raise complex ethical challenges. Who owns the creativity—is it the machine, the programmer, or the user who curates the output? In navigating this brave new world, society must weigh the promise of innovation against the potential for cultural and economic disruption.

Defining AI-Powered Creativity

At its core, AI-powered creativity involves leveraging algorithms to generate content that may have once been considered exclusively within the human domain. Whether it's creating a piece of digital art, composing music, or writing poetry, such systems operate by analyzing vast corpora of human-created work to recognize patterns, styles, and ideas, which they then recombine in novel ways. This process challenges traditional definitions of creativity, which have long embraced the notion of an intimately human spark—an ineffable combination of experience, emotion, and

conscious intent. With AI, the source of inspiration shifts from a singular human experience to a collective amalgamation of cultural artifacts, prompting us to reconsider notions of authenticity and originality.

Intellectual Property and Authorship

One of the foremost ethical dilemmas revolves around intellectual property. AI models are frequently trained on extensive datasets comprising copyrighted material, often without explicit consent from the original creators. When these models generate output that mimics or repurposes elements of their training data, serious questions about plagiarism and creative ownership emerge. Is the AI simply acting as a tool under the guidance of a human operator, or does it merit its own form of authorship? This conundrum is complicated by legal frameworks that have not yet caught up with technological innovation. As debates continue, stakeholders—including artists, technologists, and policymakers—must establish fair guidelines that protect the rights and creative contributions of individuals while recognizing the transformative potential of AI.

Bias, Transparency, and Accountability

Beyond intellectual property, another set of ethical concerns centers on bias, transparency, and accountability. AI systems are only as unbiased as the data on which they are trained; embedded societal prejudices can inadvertently become codified in generated creative outputs. For example, if a language model is trained on texts reflecting skewed gender or racial biases, these issues might subtly manifest in its creative writing—thereby perpetuating harmful stereotypes. Furthermore, the "black

box" nature of some AI algorithms complicates efforts to trace how decisions are made, leaving creators and critics alike asking: who is accountable when an AI's output causes harm or misrepresentation? Addressing these challenges requires not only technical strategies for debiasing but also ethical transparency, ensuring that creators disclose the role of AI in the creative process.

The Societal Impact on Human Creativity

A central, yet more philosophical, debate involves the impact of AI on human creativity itself. As machines become capable of generating works that rival those of human artists, some fear a devaluation of traditional creative skill and the marginalization of human labor in the arts. On the other hand, AI can serve as an inspirational partner—a wellspring of ideas that augments human creativity rather than replacing it. The ethical imperative here is to strike a balance, ensuring that AI becomes a tool to empower new forms of expression rather than a competitor that diminishes the role of human ingenuity. Embracing this potential requires reimagining creative economies and establishing platforms where both human and AI-generated works can coexist, each valued in its own right.

Conclusion

The ethics of AI-powered creativity compel us to rethink longstanding beliefs about art, authorship, and innovation. As algorithms continue to evolve and influence the creative landscape, robust ethical, legal, and societal frameworks will become indispensable. Protecting creative integrity while fostering innovation requires a multifaceted approach: ensuring transparency in AI processes, respecting intellectual property rights, mitigating biases, and ultimately,

reaffirming the unique value of human creativity in an age of technological marvels. In embracing AI's role in the creative process, society is invited to engage in a dialogue that balances progress with respect for the cultural and emotional roots of art.
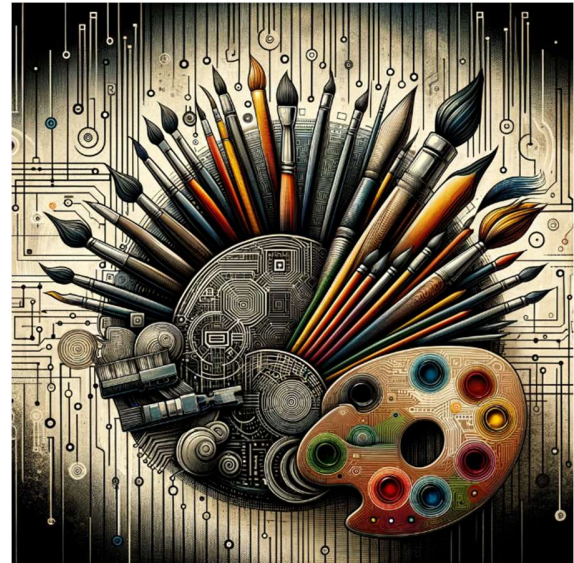
LEARN A TOOL

Microsoft PowerToys: is a set of freeware (later open source) system utilities designed for power users developed by Microsoft for use on the Windows operating system. These programs add or change features to maximize productivity or add more customization. PowerToys are available for Windows 95, Windows XP, Windows 10, and Windows 11.

PowerToys Power Calculator

Power Calculator was a more advanced graphical calculator application than the built-in Windows Calculator; it could evaluate more complex expressions, draw a Cartesian or polar graph of a function or convert units of measurements. Power Calculator could store and reuse pre-defined functions, of any arity. For example, a function could be set by cube(x) = x * x * x, and later it could be used in an expression like 5 + cube(4).[11] It did not evaluate every time an operator was entered. Rather, the entire expression must be entered for calculation. In the Numeric mode, it presented a visual keypad, in all other modes the expression had to be typed in. A scrolling text area maintained a history of all calculations. The advanced view allowed declaring and graphing functions, along with a list of all the saved functions. A flyout window provided the option of choosing either a Cartesian co-ordinate system or polar co-ordinates. It could also save a list of variables for use in expression. Unit conversions of the following types were supported: length, mass, time, velocity, and temperature. PowerToy Calc had support for typing calculations using Reverse Polish Notation (RPN). It could calculate up to 500 precision levels beyond the decimal point and supported complex numbers.
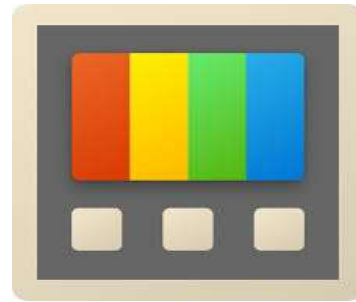
RAW Image Thumbnailer and Viewer provided thumbnails, previews, printing, and metadata display for RAW images from within Windows Explorer.

SyncToy allowed synchronizing files and folders.

Taskbar Magnifier magnified part of the screen from the taskbar.

Tweak UI customized Windows XP's user interface and advanced settings.

Virtual Desktop Manager allowed switching between four virtual desktops from the taskbar.Webcam Timershot took pictures at specified time intervals from a webcam.

PowerToys for Windows 10 and 11
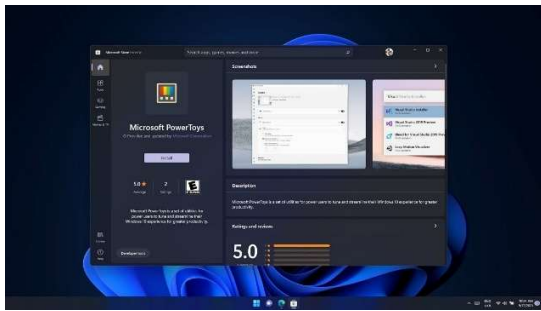
Windows 10 received PowerToys four years after its release. On May 8, 2019, Microsoft relaunched PowerToys and made them open-source on GitHub.[20] The first preview release was available in September 2019, which included FancyZones and the Windows key shortcut guide.

Included components

PowerToys for Windows 10 comes with the following utilities:

Always On Top adds the ability to quickly pin windows on top of all other windows with a quick keyboard shortcut.

PowerToys Awake adds an ability to keep a computer awake without managing its power & sleep settings.

Color Picker adds a tool for color identification (in HEX, RGB, CMYK, HSL and HSV, among others).

FancyZones adds a window manager that makes it easier for users to create and use complex window layouts.

File Explorer (Preview Panes) adds SVG, Markdown and PDF previews to File Explorer.

File Locksmith adds the ability to check which files are in use and by which processes.

Host File Editor adds the ability to edit the 'Hosts' file in a convenient way.

Image Resizer adds a context menu to File Explorer for resizing images.

Keyboard Manager adds options for remapping keys and shortcuts.

Mouse utilities adds tools that enhance mouse and cursor functionality on Windows. Currently, the collection consists of Find My Mouse, which focuses on the cursor's position; Mouse Highlighter, which indicates mouse clicks on the screen; and Mouse pointer Crosshairs, which displays crosshairs centered on the mouse pointer.

Mouse Without Borders adds a tool which allows a user to move their cursor across multiple devices.

Paste as Plain Text adds a customizable keyboard shortcut to paste text stripped of text formatting.

PowerRename adds an option for users to rename files using search and replace or regular expression in File Explorer.

PowerToys Run adds a Spotlight-like tool that allows users to search for folders, files, applications, and other items.

Quick Accent adds the ability to type accented characters in an alternative way.

REVIEW BOX

Android 15: Android 15, while focusing on incremental improvements and security enhancements, introduces features like Private Space for sensitive apps, enhanced theft detection, and better multitasking on foldables and tablets, aiming for a smoother and more secure user experience.

Key Features and Improvements:

Private Space:

A locked area on your phone to hide sensitive apps like banking or dating apps, requiring additional authentication for access.

Enhanced Theft Detection:

The updated Theft Detection Lock feature now uses AI to prevent accidental locking if your phone is snatched, and new authentication requirements are in place for settings like removing your SIM or turning off Find My Device.

Foldable and Tablet Enhancements:

On foldables and tablets, you can pin and unpin your taskbar, customize your home screen layout, and pair apps for easier multitasking.

App Pairs:

Choose two apps (like Zoom and Gmail) and have them open simultaneously in split-screen mode, making multitasking easier.

Improved Performance and Stability:

Android 15 focuses on better optimization, smoother animations, and overall system fluidity, even on older devices.

Security and Privacy:

Android 15 includes new optional security measures to make intents safer and more robust, preventing potential vulnerabilities and misuse of intents that can be exploited by malicious apps.

Other Minor Tweaks:

There are also smaller, but potentially useful, changes like a redesigned volume settings overlay with larger touch targets for accessibility.

MIND PUNCH

1) I am an odd number. Take away one letter and I become even. What number am 1?

2) Using only an addition, how do you add eight 8's and get the number 1000?

3) How many feet are in a mile?

4) Solve-15+(-5x)=0

5) Which of the following computer hardware is used to display feedback of our actions?

6) Which of the following words cannot be formed using the letters of the word CONSTRUCTION?

7) Which of the following calendars will be the same as the calendar for the year 2003?

8) Look at this series: 53, 53, 40, 40, 27, 27, ... What number should come next?

9) Which of the following numbers will replace the question mark (?) in the given series 109, 190, 239, 264, 273, ?

10)   How to get a number 100 by using four sevens (7's) and a one (1)?

IT VITA

1) What is the name of Google's quantum processor announced in 2019?

2) Which cryptographic technique ensures data integrity and authenticity?

3) Which operating system is specifically designed for ethical hacking?

4) What is the term for software that mimics human conversation through AI?

5) Which computing model breaks tasks into smaller pieces and distributes them across multiple computers?

6) Which deep learning framework is maintained by Facebook?

7) What is the process of converting code into machine language called?

8) Which field of study combines computer science

Combines computer science and biology to analyze genetic data?

9) Which protocol allows remote login over a secure channel?

10)   What type of learning involves rewards and punishments for actions?

FAMOUS AND FAVOURITE

Sugata Mitra

Sugata Mitra, born on February 12, 1952, in Calcutta, India, is a renowned Indian computer scientist and educational theorist. He is best known for his groundbreaking "Hole in the Wall" experiment, which revolutionized the understanding of self-organized learning.

This experiment involved placing a computer in a public space in a Delhi slum, allowing children to interact with it freely. Remarkably, these children, many of whom had no prior exposure to computers or English, taught themselves how to use the technology and access information. This work demonstrated the power of curiosity-driven, minimally invasive education and inspired the concept of "self-organized learning environments" (SOLEs).

Mitra's contributions extend beyond this experiment. He has a Ph.D. in solid-state physics and has worked on diverse research areas, including cognitive science and education technology. Over his career, he has been credited with more than 25 inventions and has received numerous accolades, including the prestigious TED Prize in 2013 for his vision of building a "School in the Cloud"—a platform for collaborative, self-directed learning.

His work has had a profound impact on education, challenging traditional teacher-centered approaches and advocating for the innate learning potential of children. Mitra's legacy continues to inspire educators and policymakers worldwide to rethink how technology can empower learners in diverse and underserved communities.

SOLUTIONS

MIND PUNCH

1)   Seven

2)   1000

3)   5280

4)   -3

5)   MONITOR

6)   CAUTION

7)   2014

8)   14

9)   274

10)   100

IT VITA

1)   Sycamore

2)   Hashing

3)   Kali

4)   Chatbot

5)   Grid

6)   PyTorch

7)   Compilation

8)   Bioinformatics

9)   SSH

10)   Reinforcement

SENSE OF GRATITUDE

The editorial boared expresses its sincere gratitude tto all those who are responsible, either by being on the stage or behind the screen for the successful launch of the magazine

CybercrewS