

HISTORY OF INFORMATICS FROM 2012 TO 2023

2012 – Hardware

- Processes (22nm)
- Android version 4.2 was released on November 13, 2012..
- Apple introduced the Lightning connector in 2012.

2012 – Software

- Google Drive was released.
- Adobe Photoshop was released.
- Windows 8 was released.
- Julia programming language
- TypeScript (October 2012) (Programming language)
- AlexNet (2012) (Browser, A. I.)
- The last version of BlackBerry OS (operating system) 7.1 was released in January 2012.
- Motif became open source in 2012.
- Nitro Type was officially released in January 2012.
- Google introduced Google Play on March 6, 2012.
- Internet Explorer 10 was released on October 26, 2012.
- Microsoft released the Surface Pen in 2012.
- Nord Security was founded, and NordVPN was introduced in 2012.

2012 – Historical curiosities

- On January 4, 2012, the first Cicada 3301 ARG (argument, alternate reality games) puzzle was posted.
- Computer Hope, Craigslist, Google, Reddit, Twitter, Wikipedia, and more than 115,000 other websites went dark in protest of the SOPA (Stop Online Privacy Act) on January 18, 2012.
- The Department of Justice seized and shut down Megaupload and its related sites on January 19, 2012, for Copyright infringements. One year later, Mega or mega.co.nz was launched.
- Facebook officially crossed the one billion active users mark on October 4, 2012.

2013 – Hardware

- Usb standard 3.1 was released
- The first gaming tablet was released by Razer, named the Razer Edge Pro, on March 1, 2013. It was a tablet computer designed for playing PC games, with the power and performance to do so. It featured an Intel Core i7 processor, 8 GB RAM, 256 GB SSD, NVIDIA GeForce GT 640M 2 GB video card, and a 10.1-inch display.
- AMD released the Athlon II X2 280. (2013)
- Intel released its first processor to utilize the BGA-1364 socket and featured an Iris Pro Graphics 5200 GPU.(2013)
- Valve discovered and freely shared the breakthrough of low-persistence displays (2013) (V. R.)

2013 – Software

- Windows 8.1 was released
- Excel and Word were released
- SteamOS was released
- In May 2013, Facebook released the first version of the React JavaScript library and React Native framework, giving developers new options when developing web applications.
- Google Maps Engine Lite was released for Android devices in March 2013.
- Opera Next was announced on May 27, 2013, the browser would later be renamed to Opera beta.

2013 – Historical

- Leak of classified NSA information, a massive DDoS attack targets The Spamhaus Project
- At 23:30:26 UTC on January 25, 2013, the largest known prime number containing 17,425,170 digits was discovered by GIMPS (Great Internet Mersenne Prime Search). This is important especially for web security, as most informatics security works with prime numbers using them as keys between systems. The larger the number, the harder it is to hack it.
- The popularity of drones grew rapidly, beginning in 2013.
- Microsoft announced in February that it would be moving away from the Hotmail brand and began moving over 300 million users to the new Outlook.com e-mail service.
- The Joint Collaborative Team on Video Coding formally introduced HEVC (high-efficiency video coding) on April 13, 2013.

- Adobe announced it would no longer release new versions of its popular Creative Suite bundles on May 6, 2013. In the future, all Adobe software would only be accessible via a Creative Cloud subscription.
- The Furusawa group at the University of Tokyo demonstrated complete quantum teleportation of photonic quantum bits on September 11, 2013. This achievement helped bring the quantum computer even closer to reality.

2014 – Hardware

- DDR4 memory was released.
- PCIe (PCI Express) m.2 connection standard.
- First 8 terabyte drive by Seagate.
- First eight-core desktop processor was released. The (the Intel Core i7-5960X)
- AMD introduced the socket AM1 architecture and compatible processors, like the Sempron 2650. (2014)
- AMD released its first Pro A series APU (accelerated processing unit) processors, the A6 Pro-7050B, A8 Pro-7150B, and A10 Pro-7350B. (2014)
- 14nm Process was released.

2014 – Software

- SWIFT programming language.
- HTML 5 was recommended and released.
- Babel programming language.
- Blockchain 2.0 is born. (2014)

2014 – Historical

- All Composers Desktop Project software became open-source.
- Microsoft announced on September 30, 2014, the next version of Windows, which would become Windows 10.
- Android TV was released on June 25, 2014.

2015 – Hardware

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2015 – Software

- Brave browser was released.
- Tensorflow library was released. (From google, used for AI and ML)

- Windows 10 was released after being announced the year before.
- React/Native was released.
- HTTP/2 was released.
- Microsoft released it's new Edge Browser.
- Discord was released.
- Ethereum Frontier Network was launched.(2015)
- Mozilla released version 1.0.0 alpha of the Rust programming language on January 9, 2015.

2015 – Historical

- A drone from Flirtey made a medical delivery on July 17, 2015, and became the first government-approved drone delivery.
- Starlink, a satellite-based Internet network developed by Elon Musk's aerospace company SpaceX, was first announced in 2015.
- Hopebot was integrated into the Computer Hope search in 2015.

2016 – Hardware

- HTCS Vive, Oculus rift VR were released.
- High Bandwidth Memory 2 standard (JEDEC)
- first 13 TB SSD (Fixstars Solutions)
- first five-atom quantum computer (MIT)
- 10nm Processes were released.

2016 – Software

- Office 365 was released.
- AlphaGo was released. (A. I.)
- Tiktok was released.
- PlaystationVR was released.
- Excel was released.
- Wallpaper engine was released.

2016 – Historical

- On March 12, 2016, AlphaGo, a DeepMind AI (artificial intelligence) from Google beats Go champion Lee Se-dol for the third time in playing the ancient Chinese board game of Go. Although AlphaGo won the championship, Lee did win the fourth game.
- On October 11, 2016, Samsung announced it was permanently discontinuing the production of the Galaxy Note 7 after several of the early and recalled

versions were catching on fire. The company says the decision could cost as much as \$3 billion.

- Pokémon GO was released on July 6, 2016, for Android phones and iPhones and was downloaded more than 10 million times within a week and became the fastest-growing app in history. According to SurveyMonkey, the game also became the most active game in July when it surpassed 21 million active users.

2017 – Hardware

- USB 3.2 was released.
- Intel Core i9
- Optane memory was released.
- AMD released its first Ryzen 3 ,Ryzen 5, Ryzen 7 and Ryzen Threadripper processors. (2017)

2017 – Software

- Block.one company introduced the EOS blockchain operating system which was designed to support commercial decentralized applications.(2017)
- Apple introduced macOS X 10.13, code-named High Sierra, at the WWDC (Worldwide Developer Conference) on June 5, 2017.
- Microsoft introduced the Surface Pro 2017 (fifth gen) and the Surface Laptop with the fourth generation of the Surface Pen on June 15, 2017.

2017 – Historical

- On January 11, 2017, Norway became the first country to start switching off FM (frequency modulation) radio and switching to DAB, a digital broadcasting technology.
- On August 11, 2017, OpenAI became the first AI (artificial intelligence) to defeat the world's best DotA 2 player, Danil "Dendi" Ishutin, in a 1v1 game. Even more impressive was that the AI learned to play the game by playing itself in less than a month with a little human coaching.
- Amazon released the Amazon Echo Show in May 2017.

2018 – Hardware

- NVIDIA's ray tracing in real time, Turing graphics processing architecture
- Intel released the first Core i9 mobile processor, the i9-8950HK(2018)
- 7nm Process was released.
- On June 21, 2018, the University of Michigan announced the creation of the "world's smallest computer," an ARM (Advanced RISC Machine) Cortex-M0 microcontroller measuring 0.3 mm on each side.

- In June 2018, Intel announced a limited edition i7 processor, the i7-8086K, to commemorate the 40th anniversary of the 8086 CPU.

2018 – Software

- OpenAI Five (5 AI's which could play against team in game, was in 2018)
- Microsoft released the Windows 10 April 2018 Update in April 2018, the first major update for the Windows 10 operating system since the Fall Creators Update.
- **2018 – Historical**
- On March 17, 2018, The New York Times and the Guardian revealed that the firm Cambridge Analytica harvested 50 million Facebook profiles and used that data to help Donald Trump's election team.
- On May 21, 2018, Epic Games announced it would provide \$100 million for Fortnite e-sports tournament prize pools in the first year of competitive play.
- The European Union GDPR (General Data Protection Regulation) law was enacted on May 25, 2018, for companies that conduct business in the EU. Some new laws GDPR enforces include:
 - -Companies must provide the ability for people to view, download, and delete data about themselves stored on a companies' servers.
 - -If a company has a data breach, it must be disclosed within 72 hours of being discovered.
- Google merged Google Wallet and Android Pay into Google Pay and released the service for all Android and iOS devices on January 8, 2018.
- Google introduced Google Ad Manager in June 2018.

2019 – Hardware

- eMMC standard version 5.1A
- Computed axial lithography
- AMD released its first Ryzen 9 processors. (2019)
- USB4 1.0
- Oculus released the Oculus Rift S and a standalone headset (2019)
- The first folding smartphones were introduced in February 2019, with Samsung introducing the Galaxy Fold and the Huawei Mate X from Huawei.

2019 – Software

- A new version of the Microsoft Edge browser, based on the Chromium source code, was released to the public (2019)
- 5G was released.
- Starlink was released.

- The cloud-based gaming service Stadia was released by Google in November 2019.
- Apple announced iPadOS for its iPads in June 2019.

2019 – Historical

- Amazon announced the general availability of the Amazon Managed Blockchain service on AWS.(2019)
- Google shut down its Google+ service on April 2, 2019.
- Huawei was banned from doing business with U.S. companies due to political tension with China. This ban led to Google no longer supporting Android on Huawei smartphones.
- Google began drone-based delivery via Google Wing in select areas.

2020 – Hardware

- Apple M1 was released.
- 5nm Process was released.
- Oculus released the Oculus Quest 2 (2020)
- On February 11, 2020, Samsung unveiled three new smartphones at the Unpacked keynote. The Galaxy S20 and S20 Ultra were entries in the Galaxy S series, following the release of the Galaxy S10 in 2019. Also, a foldable phone called the Samsung Galaxy Z Flip was introduced. The Galaxy Note 20 and Note 20 Ultra were also released in 2020.
- The Z Flip features a horizontal hinge behind a folding glass screen, allowing the full-sized phone to fold to half its size. The design represents the next iteration of Samsung's foldable screen designs, following 2019's Galaxy Fold.

2020 – Software

- ChatGPT 3 was created.
- Microsoft released a new version of the Microsoft Edge browser in January 2020. The new version was based on Chromium, more lightweight than the original Microsoft Edge browser and similar to the Google Chrome browser.

2020 – Historical

- In early February 2020, the outbreak of the COVID-19 coronavirus in China caused significant disruption to the worldwide technology industry. Google announced the temporary closure of all offices in mainland China, and all Apple stores in China were closed indefinitely. Companies including Qualcomm, Nintendo, and Facebook Oculus announced major losses in

production from its factories located in China. The Chinese government reported a 50% decrease in smartphone sales.

- On January 6, 2020, Amazon announced its Fire TV video streaming devices exceeded 40 million global active users.
- On January 14, 2020, Windows 7 reached EOL (end-of-life). On this date, Microsoft stopped providing any support or security updates for Windows 7, and strongly advised users to upgrade to Windows 10.
- On January 14, 2020, Microsoft issued an urgent security update for Windows 8 and Windows 10 operating systems, patching a severe security vulnerability discovered by the NSA (National Security Agency). The vulnerability allowed third parties to forge digital certificates, and improperly validate malicious software on a Windows computer.
- In 2020 there were many problems and discussions about web security. It was an important year in that regard.

2021 – Hardware

- DDR5 memory was released.
- Apple introduced updates to its custom silicon, the Apple M1 Pro and M1 Max processors.(2021)
- Tesla, who had previously used NVIDIA chips, unveiled its custom silicon, the Tesla D1 chip, for use in the self-driving Autopilot AI (artificial intelligence) in all Tesla cars.
- The Steam Deck, a handheld gaming computer developed by Valve, was released in the United States in December 2021.
- The Samsung Galaxy S21, S21+, and S21 Ultra were released in 2021.

2021 – Software

- Windows 11 was released.
- Microsoft released the Surface Pro 8 on September 22, 2021.
- Android version 12 was released on October 4, 2021.

2021 – Historical

- Valve announced its Steam platform would no longer host blockchain games. (2021)
- Twitter announced on January 8, 2021, that Donald Trump's Twitter account was permanently suspended, making him the first president to be banned from a social network.
- In June 2021, El Salvador became the first country to adopt bitcoin as a legal tender.
- Tim Berners-Lee sold the World Wide Web source code for \$5.4 million as an NFT (non-fungible token) in June 2021.

- In June 2021, 21st Century Software announced it had licensed the z/VSE source code from IBM with the intention of continuing to develop new operating system versions.
- Microsoft announced on July 14, 2021, its new monthly subscription-based service called Windows 365. The service would allow anyone with any device to run Microsoft Windows through the cloud.
- YouTube introduced YouTube Shorts in July 2021.

2022 – Hardware

- USB 4 2.0 was released.
- AMD Ryzen 9 7950X was released.
- Qualcomm Snapdragon 8 Gen 2 was released.
- Apple introduced its custom silicon the Apple M2.(2022)
- Apple introduced its custom silicon the Apple M3,M3 Pro, M3 MAX.(2022)
- The Samsung Galaxy S22, S22+, and S22 Ultra were released in 2022.

2022 – Software

- OpenAI released ChatGPT 3.5.
- Linux kernel 6.0 was released on October 2, 2022.

2022 – Historical

- Ethereum has shifted from Proof of Work(PoW) to Proof of Stake(PoS) consensus mechanism.(2022)
- On February 25, 2022, the Anonymous group declared cyberwar on Russia after it invaded Ukraine. Russia later declared Meta guilty of "extremist" activity and banned Facebook and Instagram.
- On November 6, 2022, over \$150 billion was lost in three days as the crypto exchange platform FTX announced it couldn't pay customers and declared bankruptcy on November 11, 2022. In addition to the failure of FTX, 2022 saw other crypto market failures and significant losses that contributed to more than \$2 trillion in losses, according to CNBC. The founder of FTX (Sam Bankman-Fried aka SBF) was later arrested on December 13, 2022 by the SEC. Many call 2022 the "crypto winter" and believe 2021 was the peak of all cryptocurrencies.
- Nielsen reported in August 2022 that streaming had surpassed TV viewing for the first time.
- Jason Allen entered AI-generated artwork titled "Theatre d'Opera Spatial" into Colorado State Fair fine arts competition and won first place.

- The United States White House unveiled an AI (artificial intelligence) Bill of Rights a blueprint on October 4, 2022, aiming to avert harm caused by artificial intelligence.

2023 – Hardware

- Intel Core i9-14900K (2023)
- Apple M2 Ultra (2023)
- Apple M3 family (Announced on October 30, 2023)
- 3nm Process was released.
- IBM announced in August 2023 its latest TS1170 tape drives with native support of 50 TB and 150 TB with compression.

2023 – Software

- ChatGPT 4 was made.
- BARD was released.
- Linux Mint 21.2 “Victoria” (2023)
- macOS 14 “Sonoma” (2023)
- Windows 11 (2021)
- Android 14 (2023)
- IOS 17 (2023)
- Bing released it’s browser, this time powered by ChatGPT.

2023 – Historical

- On May 30, 2023, CAIS (Center for AI Safety) released a statement from OpenAI and DeepMind, Turing Award winners, and other AI (artificial intelligence) researchers warning that their life's work on AI could potentially extinguish humanity.
- NASA announced on February 15, 2023, that a mountain on the moon's South pole would be named after mathematician and computer programmer Melba Roy Mouton. The unique mesa-like lunar mountain is now called "Mons Mouton."

2023 – Some heroes died this year

- Gordon Moore passed away on March 24, 2023 (Age: 94).
- Kevin Mitnick passed away on July 16, 2023 (Age: 59).
- Molly Holzschlag passed away on September 5, 2023 (Age: 60).

