History of Informatics
1968-1979

General links:
History of Computer Science
wikipedia history of IBM
History of Intel
Computer Hope (the website which I mentioned in whatsapp group)

Thoughts about work:
** We can make separate pages for people (like Ken Thompson and Ken Ritchie) and companies (like IBM and Bell Labs).
** We can make a single page for the Turing award, if we have time of course.

1968 – Valentyn

31 January – IBM announces the IBM Braille typewriter.
IBM Braille typewriter is the first electronic typewriter for home use. Its keyboard was almost identical to that of a standard typewriter.
IBM Braille typewriter

March - Hewlett Packard began marketing the first mass-marketed PC, the HP 9100A.
HP 9100A is the first desktop programmable calculator with many programs installed in hardware. In the modern definition, it is the first scientific calculator.
about HP 9100A
how HP 9100A was developed

3 June - Larry Roberts published ARPANET program plan.
The plan of Larry Roberts was earliest plan to create network among the key educational, military and government buildings.
Larry Roberts
Larry Roberts Arpanet plan
wiki ARPANET
history of ARPANET

4 June – the patent for MOS DRAM was granted U.S. patent describing one-transistor DRAM cell.
MOS DRAM offers faster speeds than other types of RAM.
what is DRAM

8 July - The first IBM CICS product was announced, named Public Utility Customer Information Control System, or PU-CICS.
CICS can host applications that are written in different programming languages. This support for different application programming languages allows developers to write in the best language for the job to be done and use modern languages without having to rework existing applications.

about CISC
about CISC 2
history of CISC

18 July – Intel was founded.
Intel one of the biggest multinational companies in the developing chips and processors for PC.
History of Intel Corporation

9 December - the groundbreaking computer framework known as oN-Line System (NLS) "The mother of all demons" by Douglas Engelbart.
Doug Engelbart's presentation at the 1968 Fall Joint Computer Conference, was a live online hypermedia demonstration of the pioneering work that Engelbart's group had been doing at SRI. Later called "The Mother of All Demos" by Andy van Dam, this historic demonstration paved the way for human-computer interaction.
source about Engelbart's "The mother of All Demons"

Donald Davies demonstrates a prototype packet-switching network.
Donald Davies laid the foundation of one of the most important things in the computer networking. Packet switching is the transfer of small pieces of data across various networks. These data chunks or "packets" allow for faster, more efficient data transfer.
Importance of packet-switching network
packet-switching network
Donald Watts Davies

The Japanese manufacturer OKI introduced its first serial impact dot matrix printer (SIDM), the OKI Wiredot.
By introducing the first dot matrix printer it started the producing printers for the home usage.
matrix printing

1969 – Valentyn

Intel released its first product, the 3101 Schottky TTL (transistor-transistor logic) bipolar 64-bit SRAM (static random-access memory) and 3301 Schottky bipolar 1024-bit ROM (read-only memory).
By releasing the new product Intel started its path in the developing microchips.
First Intel product
First Intel Product 2
First Intel Product 3

1 May – AMD (Advanced Micro Devices) was established.
AMD is one of the crucial multinational companies that started, like Intel, producing and developing of computer processors and related technologies for business and consumer market.
wikipedia AMD
history of AMD
History of AMD 2

2 September – first ATM went into service.
First ATM laid the foundation of usage computers for communication between banks and its clients.
First ATM
First ATM 2

29 October – The ARPANET's first host-to-host message was sent from UCLA.
21 November – The first permanent ARPANET link was established between IMP and UCLA.
The ARPANET's first message was the crucial component in the developing computer networks.
The first message transmission
The internet's first message

Ken Thompson and Dennis Ritchie develop the UNIX OS at AT&T Bell Labs. And they also developed B programming language.
The developing B programming language laid the foundation for developing C programming language, that is used also in our days.
UNIX operating system was the key point for developing UNIX and LINUX operating systems that used almost in everywhere (Android, MacOs, iOS ecc.).
About Ken Thompson and Dennis Ritchie
The invention of UNIX OS
Wikipedia UNIX
UNIX OS

Gary Starkweather invents the laser printer at Xerox PARC.
Laser printers are used very widely also in our days, so by this, it is the important inventions of 20th century.

Gary Starkweather invents the laser printer
First laser printer by XEROX

Physicists George Smith and Willard Boyle invented the charge-coupled device (CCD).
By invention charged coupled device G. Smith and W. Boyle developed the memory storage. Their invention helped to store more data on disks on less space.
Charged coupled device
CCD 2
CCD 3

Unibus was developed by Gordon Bell and Harold McFarland
The UNIBUS was a computer bus developed by Digital Equipment Corporation (DEC) in the late 1960s. It was used in a variety of minicomputers, including the PDP-11 and VAX, and it was one of the most popular computer buses of its time.
wikipedia unibus
unibus microcomputer
About buses CERN

Was established CompuServe is the first commercial online service.
CompuServe was among the first companies to introduce electronic mail capabilities and technical support to personal computer users, laying the foundation for modern online communication and customer service.

IBM 5410, or System/3 Model 10 was released.
A groundbreaking computer that played a significant role in the evolution of business computing. It was the first commercially successful minicomputer, bringing powerful computing capabilities to small and medium-sized businesses at an affordable price.
wikipedia IBM System/3
IBM System/3

1970 – Valentyn

February – Texas Instruments introduced first its ALU 74181.
It provided fast 4-bit arithmetic and logic functions, and could be combined to handle larger words, making it a key part of many CPUs. After its release it used in many components of the digit
ALU 74181
What is ALU

May – Centronics Model 101 is first dot matrix impact printer.
The Centronics Model 101 was a groundbreaking parallel printer interface introduced by Centronics Data Computer Corporation in 1970. It revolutionized the way computers connected to printers, establishing a standard that remained widely used for decades.
wikipedia Centronics
Model 101

30 June – IBM introduced the System/370, which included virtual memory and utilized memory chips instead of magnetic core technology.
Was a groundbreaking family of mainframe computers introduced by IBM in 1970. It succeeded the highly successful System/360 family and was designed to be backward compatible with its predecessor, allowing for a smooth transition for existing users. The S/370 introduced several significant advancements that cemented its position as a dominant force in the mainframe market for decades to come.
wikipedia System/370
IBM System/370

October – Intel introduced the Intel 1103, the world's first commercially available dynamic random-access memory.
It was the first commercially available DRAM IC. This breakthrough marked a significant shift in the semiconductor industry, replacing the dominant magnetic-core memory with a smaller, faster, and more affordable alternative.

December – The Network Control Protocol (NCP) was the first standard networking protocol on the ARPANET.
The Network Control Protocol (NCP) was a groundbreaking communication protocol developed in the 1970s for the ARPANET, the precursor to the modern internet. It played a pivotal role in establishing the foundation for computer networking and laid the groundwork for the protocols that we use today.
NCP
NCP Protocol

Edgar Codd introduced relational algebra.
Relational algebra is a procedural query language that operates on relations (tables) to retrieve and manipulate data in a relational database. It provides a formal and expressive way to define data queries and transformations, allowing for precise and efficient data management.

wikipedia relational algebra
relational algebra 2

Niklaus Wirth introduced the Pascal programming language.
The Pascal programming language, developed by Niklaus Wirth in the 1970s, holds a significant place in the history of computer programming. Its impact extends beyond its technical features, influencing programming education, software development practices, and the design of subsequent programming languages.
https://www.tutorialspoint.com/pascal/pascal_overview.htm
https://en.wikipedia.org/wiki/Pascal_(programming_language)

Release "Game of Life" by John Conway
John Conway's "Game of Life" is a cellular automaton that has captivated mathematicians, computer scientists, and enthusiasts for over 50 years. Its simple rules and mesmerizing patterns have sparked countless investigations into its behavior and implications.
https://playgameoflife.com/
https://en.wikipedia.org/wiki/Conway%27s_Game_of_Life
https://conwaylife.com/
https://www.britannica.com/topic/Game-of-Life-cellular-automaton-by-Conway

1971 – Vasyl

Intel, with the help of Ted Hoff, introduced the first microprocessor, the Intel 4004, on November 15, 1971. The 4004 had 2,300 transistors, performed 60,000 OPS (operations per second), addressed 640 bytes of memory, and cost $200.00. Intel also introduced the 4-bit bus.

The first edition of Unix was released on November 03, 1971. The first edition of the Unix PROGRAMMER'S MANUAL by Ken Thompson and Dennis M. Ritchie was released. It includes over 60 commands like: b (compile B program); boot (reboot system); cat (concatenate files); chdir (change working directory); chmod (change access mode); chown (change owner); cp (copy file); ls (list directory contents); mv (move or rename file); roff (run off text); wc (get word count); who (who is on the system).

Europe and the First Mass-Market "Webs". By 1971 Sam Fedida at the British Post Office and teams at the BBC and the IBA (Independent Broadcasting Association) have started developing Web like information systems that use televisions for display. The two latter systems, based on work by Philips, broadcast data on an unused portion of the TV signal. They evolve into the Teletext information services found on most European TVs into the 2000s. Sam Fedida's videotex standard at the Post Office (which also runs the telephone system) uses phone lines and has high ambitions for broad reaching uses like today's Web. It becomes the foundation of England's Prestel and, later, France's wildly successful Minitel.

Hewlett-Packard introduces the HP-35. Initially designed for internal use by HP employees, co-founder Bill Hewlett issues a challenge to his engineers in 1971: fit all the features of their desktop scientific calculator into a package small enough for his shirt pocket. They did. Marketed as "a fast, extremely accurate electronic slide rule" with a solid-state memory similar to that of a computer, the HP-35 distinguished itself from its competitors by its ability to perform a broad variety of logarithmic and trigonometric functions, to store more intermediate solutions for later use, and to accept and display entries in a form similar to standard scientific notation. The HP-35 helped HP become one of the most dominant companies in the handheld calculator market for more than two decades.

1972 – Vasyl

Intel introduced the 8008 processor on April 1, 1972.

ARPA (Advanced Research Projects Agency) gave the first public demo of ARPANET (Advanced Research Projects Agency Network) in 1972.

The compact disc was invented in the United States.

C programming language released. The C programming language is released. Dennis Ritchie and his team created C based on the earlier language BCPL (Basic

Combined Programming Language) and soon after re-wrote the source code for Unix in C. As such, Unix was easily ported to other computers and spread swiftly. C is still widely used today.

Pong is released. California entrepreneur Nolan Bushnell hires young engineer Al Alcorn to design a car-driving game, but when it becomes apparent that this is too ambitious for the time, he has Alcorn design a version of Ping Pong instead. The game was tested in bars in Grass Valley and Sunnyvale, California, where it proved very popular. Pong would revolutionize the arcade industry and launch the modern video game era.

1973 – Vasyl

Invention the Internet.
Early networks successfully connected computers. But different kinds of networks couldn't link to each other, limiting the size of online communities.

Ethernet Invention: In 1973, Robert Metcalfe and David Boggs at Xerox PARC (Palo Alto Research Center Incorporated) developed the Ethernet, a local area network (LAN) technology.
This invention marked a crucial step in the development of networked computer systems and the foundation of modern LANs.

The first computer monitor was released on March 1, 1973, as part of the Xerox Alto computer system.
The monitor used CRT (cathode ray tube) technology and had a monochrome display.

Dr. Martin Cooper made the first handheld cellular phone call to Dr. Joel S. Engel on April 3, 1973.

ALL LINKS:
https://www.oreilly.com/library/view/ethernet-the-definitive/1565926609/ch01.html#:~:text=History%20of%20Ethernet,to%20high%2Dspeed%20laser%20printers
https://www.computerhope.com/people/marcian_hoff.htm
https://www.computerhistory.org/timeline/1971/
https://www.computerhope.com/history/1971.htm
https://www.computerhistory.org/timeline/1972/
https://www.computerhope.com/history/1972.htm
https://www.computerhistory.org/timeline/1973/
https://www.computerhope.com/history/1973.htm

1974 – Robert

Introduction of Intel 8080 Microprocessor. Intel introduced the 8080 microprocessor in 1974, which became a popular choice for early personal computers and microcomputer systems. The 8080's architecture influenced the design of subsequent microprocessors.
https://graemeing.medium.com/intel-8080-launching-the-micro-computer-revolution-967a2b34985e

The development of the Internet Protocol started in 1974. In 1974, Vint Cerf and Bob Kahn published a paper outlining the Transmission Control Protocol (TCP) and the Internet Protocol (IP). This laid the foundation for the TCP/IP suite, which became the backbone of the modern internet. It enabled the intercommunication of data across different networks, facilitating the growth of the internet as we know it today.
https://www.historyofinformation.com/detail.php?id=915

The first BIOS (basic input/output system) and 8-bit operating system CP/M was created by Gary Kildall in 1974. In 1974, Gary Kildall developed the first BIOS (Basic Input/Output System), which is a fundamental part of a computer's firmware. BIOS initializes hardware components during the boot process. Kildall also created the 8-bit operating system CP/M, which was widely used on early microcomputers and played a significant role in the early personal computer era. CP/M served as a platform for many early software applications and helped pave the way for future operating systems.
https://ethw.org/Milestones:The_CP/M_Microcomputer_Operating_System,_1974

1975 – Robert

Microsoft Founded: In 1975, Bill Gates and Paul Allen co-founded Microsoft. The company would go on to become a dominant force in the software industry, with products like MS-DOS, Windows, and Office shaping the future of personal computing.
https://www.britannica.com/topic/Microsoft-Corporation

Altair 8800: The Altair 8800, developed by Micro Instrumentation and Telemetry Systems (MITS), was introduced in 1975. It was one of the first commercially successful personal computers, marking the beginning of the microcomputer revolution.
https://oldcomputers.net/altair-8800.html

Xerox PARC's Graphical User Interface (GUI): Xerox's Palo Alto Research Center (PARC) made significant progress in the development of graphical user interfaces, including the mouse-driven desktop concept and the Smalltalk programming language. These innovations laid the groundwork for modern computer interfaces.
https://www.parc.com/about-parc/parc-history/

IBM 5100: In 1975, IBM introduced the IBM 5100, a portable computer that was one of the first attempts at a portable and self-contained computer system. It was a precursor to the modern concept of portable computers.
https://historyofinformation.com/detail.php?id=924

1976 - Robert

The Apple I Computer: In 1976, Steve Jobs, Steve Wozniak, and Ronald Wayne co-founded Apple Computer, Inc. and introduced the Apple I, a personal computer kit. This marked the birth of the Apple brand and the beginning of the personal computer revolution.
https://guides.loc.gov/this-month-in-business-history/april/apple-computer-founded

Cray-1 Supercomputer: Seymour Cray's Cray Research introduced the Cray-1 supercomputer in 1976. It was one of the first supercomputers designed specifically for scientific and engineering applications, and it was known for its speed and performance.
https://www.computerhistory.org/revolution/supercomputers/10/7

Public Key Cryptography: Whitfield Diffie and Martin Hellman published their groundbreaking paper "New Directions in Cryptography" in 1976. This paper introduced the concept of public key cryptography, which has become a fundamental building block of modern secure communication and digital security.
https://news.stanford.edu/press-releases/2016/03/01/pr-turing-hellman-diffie-030116/#:~:text=Diffie%20and%20Hellman's%201976%20paper,information%20secret%20from%20any%20potential

Invention of the First Laser Printer: In 1976, Gary Starkweather, while working at Xerox, achieved a groundbreaking milestone by inventing the world's first laser printer. This invention played a pivotal role in the evolution of modern printing technology. Laser printers are known for their high-speed and high-quality output, making them an integral part of offices and homes worldwide. Starkweather's invention significantly improved the efficiency and quality of printed documents, ultimately revolutionizing the way we produce hard copies of digital information.
https://history-computer.com/laser-printer/

1977 – Adrian

January 1977: the Commodore PET 2001 was released and introduced in the US: The Personal Electronic Transactor, was presented and sold as the first personal computer in the world. This artifact developed by tech. Development industry Commodore, was meaningful in the course of the history of indormatics since it was a key element to stablish the transition between academic/military computer era into an era where computers could be a tool used by individuals for their own interests/needs.
https://collection.sciencemuseumgroup.org.uk/objects/co493761/commodore-pet-2001-8-bs-personal-computer-1977-personal-computers
https://www.si.edu/object/commodore-pet-2001-personal-computer%3Anmah_334374

February 1977: The Radio Shack TRS-80: The Tandy Radio-Shack computer was a new model and concept of home computer due to its small and appealing design, and mostly for its user friendly functionality since it had a very stable Software environment.
https://www.livescience.com/20718-computer-history.html
https://americanhistory.si.edu/collections/search/object/nmah_334337
https://history-computer.com/trs-80-guide/

April 16, 1977 - Apple II Introduced: The Apple II is also known as one of the first home computers, which became a mass selling product due to its advanced graphics and sound features.
https://americanhistory.si.edu/collections/search/object/nmah_334638
https://www.plu.edu/innovation-studies/news/how-innovative-was-the-apple-ii/

Hayes Modem: The Hayes Smartmodem was a pioneering device that revolutionized the development of PC modems, which defined a key point on the development of the internet and online industries that we know today.
https://comp.dcom.telecom.narkive.com/J6HGsVz3/history-of-hayes-modem

1978– Adrian

Digital introduced the VAX (Virtual Address eXtension) computer, arguably the most successful minicomputer in history: VAX were a line of powerful mainframe and microcomputers that became meaningful due to its functionality and versatility for different areas such as: administrative jobs, science and research, and engineering.
https://www.britannica.com/technology/VAX

October 1978 - First Computer Bulletin Board System (CBBS): This is a system used to allow computer users to dial in using modems and telephone lines to a hosting computer. It was meaningful since it was the predecessor of online user communication, allowing future systems to have a base in order to develop user

communication sites, user communities, and everything related to online user interaction.
https://www.techtarget.com/whatis/definition/bulletin-board-system-BBS#:~:text=The%20first%20BBS%2C%20called%20the,the%20U.S.%20Department%20of%20Defense.
https://pcmuseum.tripod.com/bbs.htm

VisiCalc initial development: the first electronic spreadsheet sofware began its development in this year, where the first propositions where made.
https://history-computer.com/visicalc-of-dan-bricklin-and-bob-frankston-guide/

March 18, 1978. - The first LED display prototype was shown to the public at the SEF (Science and Engineering Fair).

September: WordStar Word Processor is Invented: This processing software allowed computers to be even more useful in professional and business contexts.
https://www.wordstar.org/index.php/wordstar-history
https://history-computer.com/wordstar-word-processor-guide/

1979 – Adrian

1979 - VisiCalc, the First Spreadsheet Software: As mentioned before, this software was a game changer on revolutionazing the use of Personal computers, allowing a faster and better data processing.
https://history-computer.com/visicalc-of-dan-bricklin-and-bob-frankston-guide/
https://www.britannica.com/technology/spreadsheet#ref850101

July 1979 - The Walkman: The walkman was a revolution in music reproduction, allowing costumers to carry a small and practical device that reproduces music though headphones.
https://designmuseum.org/discover-design/all-design-objects/sony-walkman#:~:text=The%20Walkman%20was%20first%20created,to%20be%20a%20huge%20hit.&text=The%20original%20Walkman%20was%20created,models%20were%20made%20from%20plastic.
https://www.smithsonianmag.com/innovation/walkman-invention-40-years-ago-launched-cultural-revolution-180972552/

CompuServe's Dial-Up Internet Access: CompuServe, a pioneering computer information service, becomes the first commercial provider to offer dial-up internet access, enabling users to connect to the vast resources of the World Wide Web.
https://help.compuserve.com/articles/CompuServe-Advantage-Premium-Dial-up-CS50

June – Introduced first commercial version of SQL (Structed Query Language): SQL is one of the main specialized query languages designed to manage and manipulate data stored in relational databases. It is a powerful and versatile tool used for a wide range of tasks.

https://en.wikipedia.org/wiki/SQL - :~:text=In June 1979, Relational Software,Database Language SQL" language definition.
https://docs.oracle.com/cd/B13789_01/server.101/b10759/intro001.htm
https://www.coginiti.co/tutorials/introduction/what-is-sql/ - :~:text=SQL has been around since,needs of the database industry.

1 June – Intel 8088 was released: The Intel 8088 was a groundbreaking microprocessor that played a pivotal role in the development of personal computers (PCs). It was introduced in 1979 and became the central processing unit (CPU) for the IBM Personal Computer (IBM PC), which was released in 1981. The IBM PC's success established the Intel 8088 as the dominant microprocessor architecture for PCs, laying the foundation for the modern computing industry.
https://en.wikipedia.org/wiki/Intel_8086 - :~:text=The Intel 8088, released July,the original IBM PC design.
https://www.cpu-world.com/CPUs/8088/
https://www.pcworld.com/article/535966/article-7512.html