

The history of software

From basic tools to complex machinery, innovation is as old as humanity. Technology has long driven productivity improvements across all civilizations, but the advent of computers and software has increased the pace and scope of these improvements, particularly in the workplace, exponentially.

PRE-COMPUTERS



1822

First mechanical computer

Charles Babbage, an English mathematician, developed the Difference Engine, which used a series of gears and number wheels to compute polynomial functions.



1911

IBM founded

A merger of several companies that manufactured the computer scale (1885), the dial recorder (1888), the Electric Tabulating Machine (1889), and a clock that punched employee timesheets

1939

First digital computer

The "Atanasoff-Berry Computer" was the first electronic computer and innovated some of the key characteristics of modern computing, like separating memory from computation functions and using binary to represent numbers. Its sole function was to solve linear equations.



1943

Colossus Computer created to crack German code in WWII

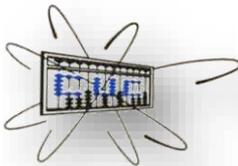
The first programmable digital computer was the Colossus, developed by the British government to help crack encrypted German telegraphs. Its impact on modern computing, however, is largely forgotten, as much of the machine and its blueprints were destroyed after the war to



1955

Computer Usage Company founded

CUC was the first company to sell software separately from computer hardware



RISE OF MAINFRAME COMPUTING



1969

First man on the moon

NASA's Apollo Guidance Computer was about as powerful a pocket calculator, and had less than 1 megabyte of memory



1972

SAP founded

Systemanalyse und Programmentwicklung, started by former IBM employees and led by Hasso Plattner, was the first company to create enterprise software to manage business operations and customer service.

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Evolution of Programming Languages

- 1956 **Fortran**; especially suited for scientific and mathematical computation, and used to program punchcards before electronic interfaces
- 1959 **COBOL**; (Common Business Oriented Language); would be used by 80% of business globally by 1997
- 1973 **C**; encouraged cross-platform programming by running on multiple operating systems with little code adjustment
- 1974 **SQL**; (Structured Query Language); designed to manage data in relational database management systems
- 1975 **BASIC** (Beginner's All-Purpose Symbolic Instruction Code); Altair BASIC was the foundation of Microsoft, and emphasized ease of use
- 1987 **Perl**; especially good for manipulating text files and graphics, it was referred to as the "duct tape" that holds the internet together
- 1989 **Python**; designed to make programs readable and clear by using plain English in commands, whitespace rather than brackets, and shorter lines of code
- 1994 **Java**; developed by Sun Microsystems as an alternative to C/C++ languages
- 1995 **Ruby**; an object-oriented language popularized in 2004 by the open-source web application framework called Ruby on Rails

1957

ADP uses mainframe computers to process payroll
ADP pioneered the use of computers in the business world when they installed an IBM mainframe computer and utilized punchcards to process payroll for their clients



1971

First Microprocessor

The microprocessor allowed for smaller computer units by integrating the functions of the central processing unit onto a single circuit. Previously, most computers weighed up to 30 tons, and took up more than 1000 square feet of floor space



RISE OF CLIENT-SERVE
RISE OF DESKTOP SOFTWARE



1976

Release of the Apple I Computer

Steve Jobs, founder of Apple Computers, revolutionized the industry when he introduced the concept of the personal computer.



1978

First Accounting Software

Peachtree was the first business software for micro-computers, developed to help manage accounts receivable and payable for small businesses.



1989

Microsoft Office released

There were other word processing software products available before the release of Microsoft Office, but the popular program for business and personal use quickly left them in the dust.



1993

First web browser

Mosaic, the web browser that first popularized the World Wide Web, was developed by a team led by Marc Andreessen.



1999

Capterra founded

Capterra, a free online service, was created to connect buyers and sellers of business software. Today, Capterra gets 10 million visitors per year and lists over 20,000 software companies



2000

"Dot-Com" Bubble Burst

On March 10, 2000, the Nasdaq Composite Index peaked at 5,048.62, more than double what it was just one year before.



2007

Apple iPhone launched

The iPhone made mobile computing easy and accessible. 6.1 million units of the first generation iPhone were sold in the first 5 quarters after its release.

1975



Microsoft founded

Bill Gates and Paul Allen's first product was a BASIC programming language interpreter for the Altair 8800 microcomputer. They sold this program back to Altair's creators, and named their new company Microsoft after their main product: "microcomputer software."

1977



Oracle developed

Larry Ellison, developer of Oracle, was originally contracted by the CIA to develop a database program

1979

First Spreadsheet Software

Visicalc was originally only available on the Apple II computer, but the \$100 software was in such high demand that many people bought the \$2000 computer system just to access it.



1980

1990

1991



Linux released

Based on its predecessor UNIX, this operating system developed by Linus Torvalds jumpstarted support of free and open-source software.

1994

Quickbooks launched

Quicken, Intuit's (founded 1983) first and most well-known program, was developed to manage personal finances. The product was hugely successful by the early 1990's, so the company launched QuickBooks, a similar solution for small businesses.



1999



Salesforce.com launched

Founded by a former Oracle employee, Marc Benioff, the web-based Salesforce CRM system was the first business software developed to run on the cloud.

2000



2000

The new millennium caused two main issues in the software world. Abbreviating dates by their last 2 digits caused the year 2000 to be recognized as 1900, and some programs incorrectly overlooked 2000 as a leap year.



2006

Google Apps for Business launched

Google began offering custom domain names for Gmail accounts. In 2007, Google Docs and Spreadsheets were launched, and Google Drive launched in 2012, further solidifying Google's online collaboration tools as an alternative to Microsoft Office.

2007

Rise of Big Data

By 2007, 94% of data storage was digital. Because the sheer volume of this data makes it difficult to analyze, software was created to mine data warehouses for business intelligence.

RISE OF SOFTWARE-AS-A-SERVICE



2010

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Rise of Tablet Computing

In 2010, Apple, Samsung, and Dell all launched their version of tablet computers. Today, 30% of U.S. households with internet access own at least one tablet, and mobile advertising has become a multi-billion dollar industry.



2013

VC backed software companies break funding record

Venture capital funding of the software industry broke records in 2013 with \$11 billion dollars: the highest investment in the software sector since the Dot-Com Bubble Burst in 2000, and a 27% increase from 2012



2012

Rise of wearable technology

With the launch of the Fitbit in 2007, the general release of Google Glass in 2013, and the announcement of the Apple Watch (to be available in 2015), wearable technology is on the rise. Computers can now be found in everything from cars to refrigerators and other household appliances, and serve as proof for how much technology has impacted daily life.

The Future of Computer



Over 500,000 of the 21 million college students in America majored in computer science in 2013, a 30% increase from the year before.

There are over one million Software Engineers employed in the U.S., and more than 10 million worldwide. By the year 2020, there are expected to be more than 1.4 million job openings relating to computers, and only enough graduates to fill 30% of them.



With increased mobile security, access to the cloud, and an "everything everywhere" mindset, employees will continue to turn to mobile devices for their business software needs, and the use of apps as a type of software will continue to rise.

The business software market is now a 300 billion dollar industry that serves tens of millions of companies across the globe, from street vendors and farmers to nonprofits and multinational corporations, and every type of business in between

