Name	Contribution to CS	Years
Charles Babbage	Designed the Difference Engine and Analytical Machine (precursor to modern computers, used punch cards for variables, input, and output inspired by Jacquard Loom)	1791-1871
Ada Lovelace	Met Babbage at age 17 (1833), documented Babbage's work, created "first program" to calculate 8th Bernoulli number, various contributions to mathematics	1815-52
Grace Hopper	Helped create COBOL (one of the first high-level PL's) coined "debugging", led movement of PL's to be more user-friendly and made significant contributions to status of women in computing	1906-92
Alan Turing	Designed famous "Turing machine" in 1936 paper, proposed first electronic calculator (ACE) in 1946 paper, code-breaking in WWII at Bletchley Park, often considered father of modern computers	1912-54
George Boole	Introduced Boolean algebra, English mathematician with various contributions to theory/math/logic that are foundational to modern digital circuits	1815-64
Analytical Engine	Designed by Babbage as first automatic computing machine with punch cards (in theory, was first Turing-complete machine with memory and conditional logic)	1830-1906
Vint Cerf	"Father of the Internet" (1973), co-designer of TCP/IP protocols, Turing Award winner in 2004	1943-current
Algol	"Most influential PL", first example of recursion in PL, influenced stack-based programming	Late 1950's
COBOL	First user-friendly "high-level" programming language, designed by Grace Hopper	1959
Donald Knuth	Authored Art of Computer Programming, had many contributions to 20th-century computer science, 1974 Turing Award, professor at Stanford, invented TeX	1938-current
Unix	Early operating system created at Bell Labs, foundational to current operating systems including Linux	1969
Ken Thompson	Co-developed UNIX and C programming language, Turing Award (1983)	1943-current
ARPANET	Pre-cursor to Internet funded by US Defense Department, very interesting project where most research/development in modern networking technologies stemmed (and notable case studies of relationship between government, research, and industry amidst global tensions)	1960's
Paul Allen	Co-founded Microsoft in 1975, investor and philanthropist	1953-2018

Dennis Ritchie	Co-developed UNIX and C programming language, Turing Award (1983)	1941-2011
FORTRAN	One of the first high-level programming languages designed heavily by John Backus at IBM	1954
ENIAC	(Electronic Numerical Integrator and Computer) One of the first general-purpose electronic computers, built for US Army for calculating artillery firing tables	1946
RSA	Fundamental algorithm in public-key cryptography, still the most commonly used today (the 70's are a really interesting decade to dig into for cryptography/theory research!)	1977
Jacquard Looms	One of the earliest examples of automating a task (weaving) which wove textiles based on patterns from punch cards	1801
Universal Turing Machine	Theoretical machine designed by Alan Turing which simulate any other Turing machine, performing any of the same computations; significant contribution to computational theory and design of modern computers	1936
Herman Hollerith	Invented automated punch card tabulator used in the 1890 US census; founder of Hollerith Tabulating Company which eventually became IBM	1860-1929
IBM	Drove innovations in mainframe/personal computing/programming languages in 1950's-current	Founded in 1911 (as CTR), renamed IBM in 1924
Bell Labs	Hub of innovations and inventions in computer science, including transistors, mainframe/personal computers, and Unix	Incorporated in 1925
Moore's Law	Early observation by Gordon Moore that the number of transistors in an integrated circuit doubles approximately every two years	1965
Google	Established at Stanford with one of the earliest search engines, eventually leader in cloud computing, software, browsers and web development, etc.	1998
Tim Berners-Lee	Inventor of the World Wide Web released in 1989, current Director of the World Wide Web Consortium (W3C)	1955
Steve Wozniak	Co-founded Apple in 1976, inventor of Apple I and Apple II computers	1950-current
CSE Department at UW	Initially established as the Computer Science Group (housed in Roberts Hall) – named Paul G. Allen School of Computer Science & Engineering in 2017	1967

LaTex	Popular typesetting language created by Leslie Lamport (based on Tex which was created/released by Donald Knuth in 1978)	1983
Apple	One of the first personal computer companies, drove much innovation in computers, software, operating systems, and connected devices from 1976 to today	1976 (April Fool's Day)
Claude Shannon	Author of Mathematical Theory of Communication in 1948, significant contributions to modern Information Theory	1916-2001
William Shockley	Inventor of the junction transistor of 1948, physicist at Bell Labs before establishing his own semiconductor company in 1955	1910-89
Linus Torvalds	Developer of the Linux kernel released in 1991	1969-current
CSE1 (Allen Center)	"Upgrade" from Sieg Hall (old home of CSE department) – see link for interesting article, especially in context of our new CSE2 opening!	2003
Amazon.com	Revolutionized modern online economies and eventually cloud computing/IOT/etc.	1994
John Backus	Developer of FORTRAN and Algol (IBM), inventor of BNF (Backus-Naur form) which defines formal language syntax, 1977 Turing Award winner for work on functional programming	1924-2007
Alonzo Church	Many mathematical contributions, including Lambda calculus and Church-Turing thesis on definition of computer	1903-95
Blaise Pascal	French mathematician/philosopher who created first mechanical calculator, invented Pascal Triangle (also invented the wheelbarrow and roulette wheel)	1623-66
Bertrand Russell	British logician/philosopher with contributions mathematical logic as well as active campaigner in 20th-century social/political issues; key character in Logicomix book	1872-1970
First Mechanical Calculator	Created in 1642 by Pascal (Pascaline) (note that the first calculator is debatable, but the Pascaline is commonly considered as the most significant milestone in early calculators as the first adding machine implemented)	1642 – note that the abacus was invented around the 9th century, also considered as the first calculator for some definitions

Binary Number System	Credited to have been invented by Gottfried Leibniz around 1700, foundational to information theory/computer science	*Debated*
E-mail	Revolutionary technology for communicating between two known parties on different computers	1972 (Ray Tomlinson)
iPhone	One of the first "smart phones", led to popularization of 3rd-party mobile app development	2006
Python	Early high-level untyped programming language (and invented before Java!) with many applications today in data science and machine learning	1989