



Famous Fridays



Computer Science II



Alan Turing

- One of the most well-known figures in computer science
- Famously known for his role breaking the German Enigma code during World War II
- Turing Machine - a theoretical model of computation.
 - Demonstrated that any problem solvable by an algorithm could be solved by a Turing machine, laying the foundation for computer science.
- Other Major Contributions
 - Halting Problem
 - Turing Test

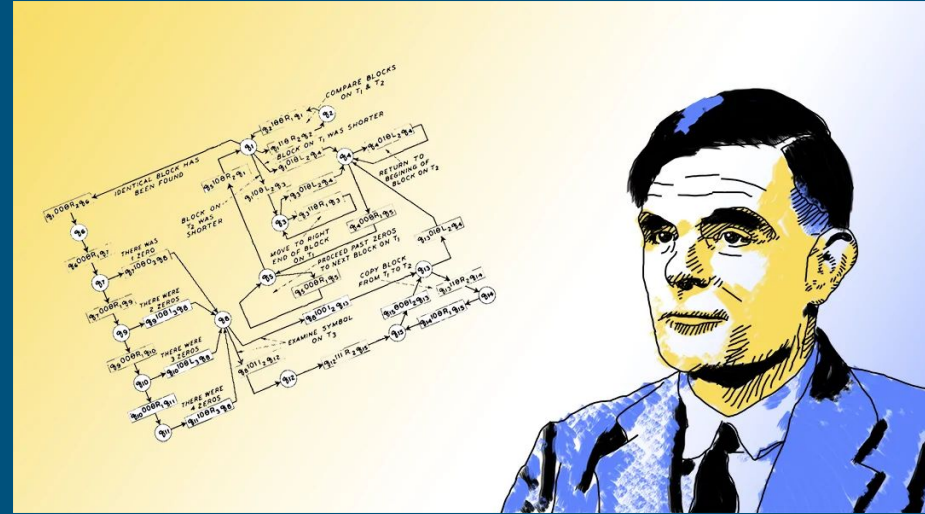


Image from:
<https://www.advancedsciencenews.com/pioneers-in-science-alan-turing/>

Grace Hopper

- Developed the early compiler in the 1950s
- Worked on the Harvard Mark I computer project
- Played a large role in creating COBOL
- Her work in programming languages paved the way for code that could run on different platforms
- Credited with the coining the term **bug**
- Trailblazer for women in computing

Go watch [The Queen of Code](#), a short documentary about Grace Hopper's legacy.



Image from: https://en.wikipedia.org/wiki/Grace_Hopper

Charles Babbage

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Ada Lovelace

- Father of the computer
 - **Designed** the Analytical Engine (1837), a precursor to "modern" computers
 - Fundamental principles of a stored program and conditional branching
 - "Mr. Babbage believes he can, by his engine, form the product of two numbers, each containing twenty figures, in three minutes" from *Sketch of the Analytical Engine*
- World's first computer programmer?
 - Credited with writing the first algorithm designed to be processed by a machine
 - Recognized these machine could do more than manipulate numbers, a fundamental idea for future programming languages
 - Collaborated with Babbage on his Analytical Engine by creating algorithms



Reshma Saujani

- Founder of [Girls Who Code](#) - an initiative/foundation to close the gender gap in the tech sector
- Saujani does not come from a programming background
 - Read more about her [here](#)
- Visited and spoke at Elon in Oct '23
- Interview on [The Daily Show](#)
- Ted Talk entitled [Teach girls bravery, not perfection](#)



Donald Knuth

- Father of analysis of algorithms
- Won the Turing Award (1974)
- Wrote *The Art of Computer Programming*
 - Seminal work focusing on algorithms and their computational complexity
- Longtime professor at Stanford



Rediet Abebe

- Research on the interaction of algorithms and inequality, with a focus on AI
- Professor at Cal Berkeley (currently on leave doing research at Harvard)
- Founded [Black in AI](#) and [Mechanism Design for Social Good](#)
- [TEDx Talk](#) on her journey and her work



Andrew Ng

- Leading AI researcher, entrepreneur, and thinker
- Professor at Stanford
- Founder of Coursera and Google Brain
- AI optimist
- Ted Talk - [How AI Could Empower Business](#)



Influential Computer Scientists of Tomorrow



A word cloud of names of influential computer scientists of tomorrow. The names are arranged in a roughly circular pattern, with some names appearing more frequently than others. The names are: jack, sophie, cassidy, cayla, alexander, sammy, essence, via, gavin, ben, sam, mason, grace, brantley, adam, holly, tyler, anna, annalie, benji, ella, anahy, vlad, jules, berkie, diego, lindsey, joshua, matilda, sivan, ali, erik, hassan, natalie, jasson, ridge, seleyna, katie, amelia, owen, julia, juan, ellie, preston, cody, anuraag, garrett, megan, jose, alex, and aidan.