## Impact of Computer Science



Computer Science has been at the cornerstone of many of the biggest innovations that we use to fuel everyday life. In 2009 a group from the Wharton School set out to figure out the most important innovations from the preceding 30 years. In creating this list, the judges defined innovation as **something new that creates new opportunities for growth and development.** 

## Top 30 innovations: 1979-2009

- 1. Internet, broadband, WWW (browser and html)
- 2. PC/laptop computers
- 3. Mobile phones
- 4. E-mail
- 5. DNA testing and sequencing/Human genome mapping
- 6. Magnetic Resonance Imaging (MRI)
- 7. Microprocessors
- 8. Fiber optics
- 9. Office software (spreadsheets, word processors)

- 10. Non-invasive laser/robotic surgery (laparoscopy)
- 11. Open source software and services (e.g., Linux, Wikipedia)
- 12. Light emitting diodes
- 13. Liquid crystal display (LCD)
- 14. GPS systems
- 15. Online shopping
- 16. Media file compression (jpeg, mpeg, mp3)
- 17. Microfinance
- 18. Photovoltaic Solar Energy

- 19. Large scale wind turbines
- 20. Social networking
- 21. Graphic user interface (GUI)
- 22. Digital photography/videography
- 23. RFID and applications (e.g., EZ Pass)
- 24. Genetically modified plants
- 25. Bio fuels
- 26. Barcodes and scanners
- 27. ATMs
- 28. Stents
- 29. SRAM flash memory
- 30. Antiretroviral treatment for AIDS

## Impact of Computer Science on these Innovations

The field of Computer Science played an important role in the creation of many of these innovations, and has transformed the way each of these innovations now work. Everything from microfinance to DNA sequencing has been completely changed thanks to people applying computer science techniques and tools to help solve these problems.







Want to learn more about innovations made possible by Computer Science? Check out this video from our CS Principles course! <u>bit.ly/cs-innovation-video</u>