

Why study Computer Science?

Because no matter what your interests are, your knowledge of basic programming will **open doors**.



Meaningful Work

IT professionals work on creative teams to develop cutting-edge products and solutions that save lives, solve health problems, improve the environment, and keep us connected.



Many fields have been **transformed** by applications of computing technology that **you** can learn to build:

- **Medicine:** enhanced diagnostics, epidemic tracking, medical record systems
- **Apparel design:** automated pattern drafting, virtual clothing design
- **Sports:** workout motivator, motion capture training, computer science in sports
- **Robotics:** emotional dancing robots for autism, military mule
- **International development:** communication tool, election tracking, disaster management
- **Music:** Auto-Tune in rap, search by humming
- **Games:** smart toy blocks, art, business and science of video games, army training
- **Literature:** digitizing books

Garfield HS Computer Science Options (www.garfieldcs.com):

- **[Exploring Computer Science](#)** (for the non-techie, one semester)
 - Explores a variety of computer technologies to give students ideas on how they work and can be applied in their future studies and careers. No requirements.
- **[Introduction to Computer Science](#)** (Creative Computing, one semester)
 - An introduction to programming concepts building a series of useful and creative applications using the visual programming language Scratch/Snap. Qualifies for Tech Prep credit.
 - Requires Algebra I and currently in Geometry, but no programming experience.
- **[Advanced Placement Computer Science A](#)** (AP CS, a yearlong class)
 - Learn how to program clever projects in the popular language Java, [can qualify for college credit](#).
 - Requires Algebra II and strong foundation in Math, but no programming experience
- **[Projects in Computer Science I & II](#)** (post AP CS projects)
 - Build projects of your own choosing in small teams and learn industry standard project management techniques. Requires AP CS and permission of teacher.

Computer Science Means Rewarding Careers

Jobs are plentiful, interesting, and flexible. The U.S. Department of Labor predicts that computer science-related jobs will be among the fastest growing and highest paying over the next decade. Job prospects have remained strong despite economically challenging times. Computer scientists also enjoy a wide range of career options since all industry sectors today involve computing (e.g., the arts, film, finance, health care, journalism, manufacturing, music, security).



- Five of the fastest growing occupations are computing occupations.
- By 2016, there will be 1.5 million computing-related jobs available.
- Computing-related jobs are among the highest entry-level salaries of any bachelor's degree.

Articles about Computer Science:

- [Developers you love and why they love developing](#) - “I realized that the most powerful way to affect the world is to write computer software”
- [Kids, Programming, and doing more](#) – “Over the coming years, **the collaboration between computers and machine is only going to grow.** Computers will do what they are

good at, large scale data processing, computation, and analysis. Humans will do what they are good at, finding patterns, intuiting promising paths forward despite noise and missing data, and collaborative problem solving. **Those who can fully use computers, and especially those who can program computers, will be more productive.** Computers are a powerful tool for those who can wield it.”

- [This 15-Year-Old Built An App To Help His High School Debate Team. It Could Do Much More Than That](#) - “I’m a Lincoln-Douglas debater, and it involves lots of prep, reading evidence files and cases. It’s a long process for me, and I wanted to find something to condense an article into something more concise and readable. ... **I didn’t start with the sense of wanting to release a product. I started with, how can I take this process and make it better** for my debate team?”
- [When the Nerds Go Marching In](#): *How a dream team of engineers from Facebook, Twitter, and Google built the software that drove Barack Obama’s reelection* – “By the end, the campaign produced exactly what it should have: a hybrid of the desires of everyone on Obama’s team. **They raised hundreds of millions of dollars online, made unprecedented progress in voter targeting, and built everything atop the most stable technical infrastructure of any presidential campaign.**”
- [These 11 tech giants are paying software engineers on average \\$100,000 or more](#) – “**The market for software developers remains red hot.** And companies looking to attract the best and brightest minds are paying top dollar — stressing yet again the need for additional educational resources in the fields of science, engineering and math.” “**In Seattle as a whole, software engineers reported an average base pay of \$102,006.** That was the [second highest in the nation](#), coming in about \$5,000 behind San Francisco where the average base pay stood at \$107,798.”

Flexibility and Variety

Many IT careers offer flexible hours or telecommuting, making it easier to blend career and family. And IT professionals have skills that are useful in many different jobs.

