

The Gender Gap in Computer Science

Learning Objectives:

- Gain knowledge about history of computing
- Reflect on the gender gap within computer science
- Discuss effects of gap on individual programmers, teams, companies and consumers

Science, Technology, Engineering and Mathematics (STEM) fields have a sizeable gender gap, but this was not always the case. Of all the undergraduate computer and information sciences degrees awarded recently, only 18% were to women. However, for decades the number of women in CS was growing faster than the number of men.

<http://www.npr.org/sections/money/2014/10/21/357629765/when-women-stopped-coding>

The first computer programmer was actually a woman, Ada Lovelace (1815-1852), who wrote the first machine algorithm.

Grace Murray Hopper (1906-1992) invented the first compiler and designed the first high-level programming language called COBOL which is still used today. Because of her work, we can write code in a more human-readable language which makes programming more accessible.

These two women, along with countless others, left a mark on STEM.

<http://www.npr.org/sections/alltechconsidered/2014/10/06/345799830/the-forgotten-female-programmers-who-created-modern-tech>

But today, computer science is a male-dominated field. Many organizations have initiatives to help bridge this gap. Companies and individuals are creating toys like GoldieBlox to encourage young girls early.

<https://www.youtube.com/watch?v=IIgyVa5Xftw>

Some female-focused initiatives have not been well received with people in the community writing responses and filming videos.

Science: It's a Girl Thing!

<https://www.youtube.com/watch?v=GMOqpxlW66E>

Response to Science: It's a Girl Thing!

<https://www.youtube.com/watch?v=He8cl5nlJaU>

Barbie: I Can Be a Computer Engineer

<http://www.dailydot.com/parsec/barbie-engineer-book-girls-game-developers/>

Barbie rewritten

<https://caseyfiesler.com/2014/11/18/barbie-remixed-i-really-can-be-a-computer-engineer/>

Write a response to this issue discussing how it affects you personally as well as computer science as a whole. Should we be concerned about the gender gap? Why or why not?

Use the material I provided and other articles you find as evidence to back up your discussion.

This topic is an ongoing discussion within the science community. The following article is a response to the manifesto written and circulated internally by a Google employee.

<https://www.recode.net/2017/8/11/16127992/google-engineer-memo-research-science-women-biology-tech-james-damore>

Your response should be approximately 3-4 pages, double-spaced. This is an individual assignment; therefore, it should be written on your own.

Submission

Please submit two copies:

1. One to Canvas as a Word document or PDF. Please include your name in the file name.
2. One **printed** copy turned in at the beginning of class.