

Gender gap in FLOSS

A report on developments and the status quo

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Discrimination in the tech industry

- GitHub: 14 million users
- Pull-request of females more often rejected
- Why is that?

Discrimination in the tech industry

- Wikipedia: largest encyclopedia of mankind
- Most editors are male
- Acceptance rating on articles about females is low

Implications?

- Missing information leads to lack of content variety
- Lack of content variety leads to bias
- Bias leads to discrimination

Example: assistive devices

- Home assistance: Alexa, Google Assistant, etc.
- Apps: Siri, Cortana, etc.
- Google search



ada lovelace



All

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About 5.930.000 results (0,71 seconds)

en.wikipedia.org > wiki > Ada_Lovelace ▾

Ada Lovelace - Wikipedia

Augusta **Ada** King, Countess of **Lovelace** (née Byron; 10 December 1815 – 27 November 1852) was an English mathematician and writer, chiefly known for her work on Charles Babbage's proposed mechanical general-purpose computer, the Analytical Engine.

Known for: Mathematics, computing

Died: 27 November 1852

Resting place: Marylebo...

Resting place: Church of St. Mary Magdalene,

Born: The Hon. Augusta Ada Byron

...

Decem...

[Charles Babbage](#) · [Analytical Engine](#) · [William King-Noel, 1st Earl of](#) · [Lady Byron](#)

People also ask

What is Ada Lovelace famous for?



What did Ada Lovelace do for computers?



How did Ada Lovelace die?



What did Ada Lovelace create?



Feedback



More images

Ada Lovelace



Mathematician

Augusta Ada King, Countess of Lovelace was an English mathematician and writer, chiefly known for her work on Charles Babbage's proposed mechanical general-purpose computer, the Analytical Engine. [Wikipedia](#)

Born: December 10, 1815, [London, United Kingdom](#)

Died: November 27, 1852, [Marylebone, London, United Kingdom](#)

Full name: Augusta Ada King-Noel, Countess of Lovelace

Spouse: [William King-Noel, 1st Earl of Lovelace](#) (m. 1835–1852)

State of research interest

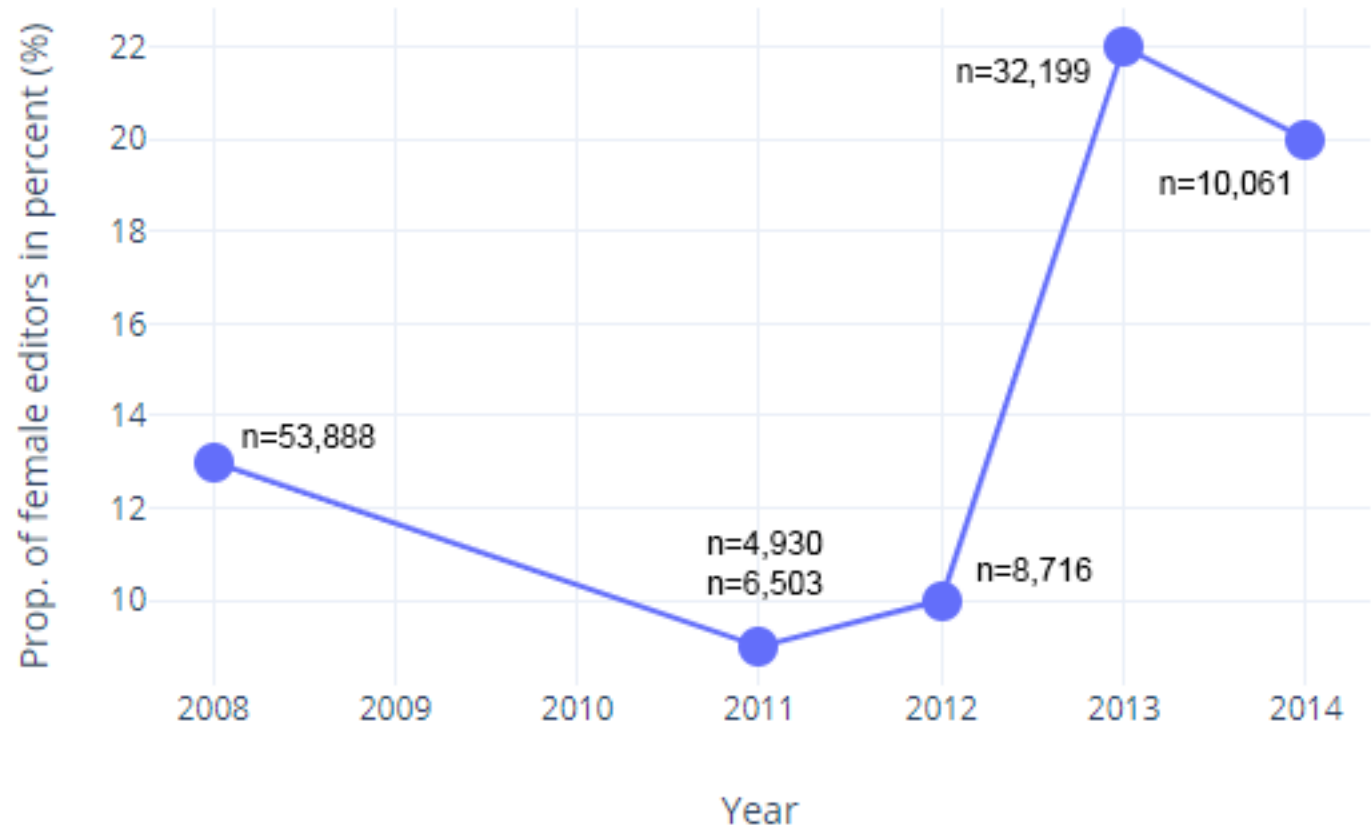
- Systemic bias: academically recognized
- New Media shift: Gender Gap is being researched
in open source & open data

Considerations / Limitations

- Most studies conducted in western world
- Most studies are user studies
- Not enough research on LGBTQ+ within Open Source / Open Data
 - We thus focused on the gender gap between male & female

Wikipedia – Female editors

- 6 studies published 2008-2014 by Wikimedia Foundation
- Strongest estimate: 22% of editors are women
- Positive trend since 2011



Wikipedia – Self-perception

- Helgeson et al.: difference between male & female self-perception & confidence
 - Why? Societal? Experiences?
 - Needs further research
- Hinnosaar et al.: gender gap due to difference in self-perception
 - Because of Wikipedia or rather external influence?
 - Needs further research

Wikipedia – Conflicts with contributions

- Lam et al:
 - Female newcomer-editors more likely to quit Wikipedia after their edits get reverted
 - Articles with females dominating the edits are significantly more often subject to heated debates
- Conflicts → discomfort → demotivation → quitting

Wikipedia – Notability criteria

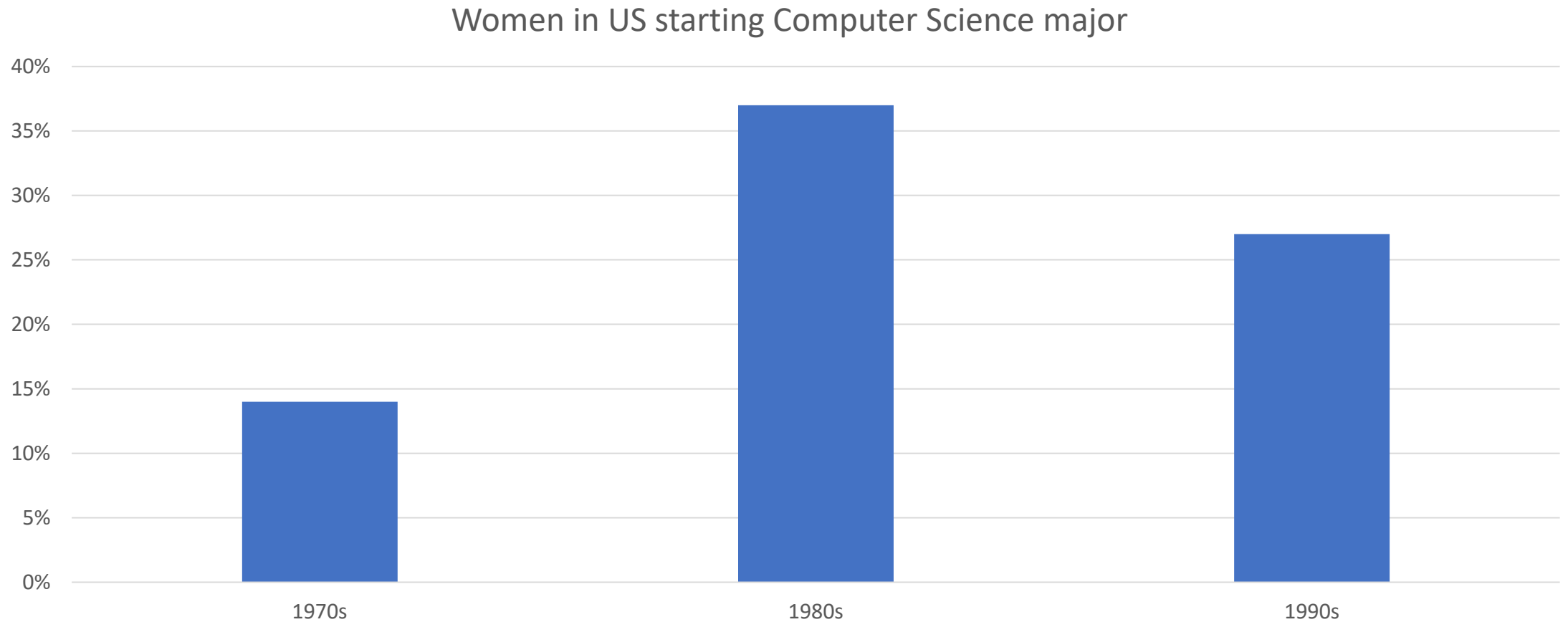
- Wagner et al.: acceptance criteria often unfavorable towards women
- Klein et al.: situation is getting considerably better
 - World is changing & it is reflected in Wikipedia

How to combat the gender gap on Wikipedia?

WE SUGGEST

- Be careful when reviewing edits of newcomers
 - Emphasize this in Wiki-guidelines
- Thank users for their contributions → strengthen self-esteem
- Encourage participation through female-focused info events

Female Participation in Computer Science



Stereotypes

- Examples: male-dominated, brilliant, nerdy, lack social-skills
- Media portrays computer scientists in a stereotypical manner
- Hypothesis: Women don't consider Computer Science careers because of stereotypes
- Stereotypes in childhood with occupation choice

Social Barrier

- Personal
 - Hesitation in beginning a career in masculine field
 - Work-family balance?
 - Under-estimation
 - Put at disadvantage for displaying expertise
- Outside
 - People lack understanding of the field
 - Don't recommend because it's perceived more appropriate for men
- More likely to pursue CS when family supports it

Role Models

- Lack of female role models nowadays
- Richest and most influential computer scientists usually men

Exposure to Computers

- Financial situation
 - High-poverty school → little access to computers
- Gender
 - Difference in use of computers
 - Boys more likely to have access to computers
 - First experience with computers because of video games
 - Boys more likely to use computer for coding
 - Girls start using computer later

Women in FLOSS

- Women make first contributions later in life
- 2010-2013
 - 39% new female contributors
 - 19% new male contributors
- Women code less