Diversity Problem

- Computing Science has a diversity problem
  - <20% CS Majors are Female (US)
  - Stack overflow 2015 survey: 92% respondents male
  - Views by gender % on my YouTube videos (- 2017)

![Android ImageButton](image1)
![Linux fork()](image2)
Which one of these people is not a programmer?
Unconscious Bias

- Entrepreneurial ventures pitched by men preferred over..
- Gendered names randomly assigned to applications for lab manager position at major institutions. (ex Alex vs Alexis)

Male names were
  - “rated significantly more
  - “offered a.. and more career mentoring”

https://medium.com/tech-diversity-files/if-you-think-women-in-tech-is-just-a-pipeline-problem-you-haven-t-been-paying-attention-cb7a2073b996
Unconscious Bias

- **Assertiveness** in men seen as..
  **Assertiveness** in women seen as..
- Women asking for higher pay seen as **less nice** and **more difficult to work with**; men not perceived negatively.
  - SFU removing some flexibility in salaries to reduce gender differences
- Anecdote of bias in hiring committee’s valuing of interdisciplinary research experience.
- Perceiving oneself as unbiased..

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Culture Problem

- **CS stereotype:** hackers coding all night
- 1960’s Vocational interest scale for programmers:
  - Identified a..
  - Created self-fulfilling prophecy
- Companies are working to get beyond this:

[https://martinfowler.com/articles/born-for-it.html](https://martinfowler.com/articles/born-for-it.html)
Micro Aggression

- Micro Aggression:...

- Examples
  - “Wow, you are good at programming for a woman!”
  - “I was pleasantly surprised your portfolio was written in full sentences.”
  - “Girls don’t play WoW.” (9330 google hits) By contrast: “Boys don’t play WoW” (3 google hits)

- It Adds Up
  - Single one not monumental; many each day over the years add up!
  - Often done below level of consciousness
Actual Example

- At ACCU 2012 conference keynote address from his apology posted to GitHub: https://gist.github.com/unclebob/2508746

  C was for real men

  “Uncle” Bob Martin (Keynote Speaker)

  Female audience member

  What about the women?

  We didn't allow women in those days.

- Comment Section Response
  "Dear Uncle Bob, you should not apologize. It is time to stop this non-existent anti sexism thing and start caring about real problems."
Riot Games makes League of Legends

Reported to have gender bias

- “Across the board, you’d have side-by-side similar backgrounds, but the leadership team would constantly ixnay any female candidate for leadership.”

- Some female employees felt there was a very strong gamer-culture / “bro-culture”.

- Company strongly contests these characterizations: “We have a zero tolerance policy on discrimination, harassment, retaliation, bullying, and general toxicity.”

Source: https://kotaku.com/inside-the-culture-of-sexism-at-riot-games-1828165483
“Google’s Ideological Echo Chamber”

• Google employee wrote “anti-diversity” document
  – He (partly) attributed the gender pay gap and under-representation of women to biological differences.

• Part of one of his sections:

Personality differences

Women, on average, have more:

  ● Openness directed towards feelings and aesthetics rather than ideas. Women generally also have a stronger interest in people rather than things, relative to men (also interpreted as empathizing vs. systemizing).

    ○ These two differences in part explain why women relatively prefer jobs in social or artistic areas. More men may like coding because it requires systemizing and even within SWEs, comparatively more women work on front end, which deals with both people and aesthetics.
“Google’s Ideological Echo Chamber”

- **Memo criticized for:**
  - Inaccurate use of study results (debated)
  - Categorizing all women in one way

- **Author was fired**
  - Author filed a complaint with the US National Labour Relations Board on the grounds that his document was protected by free speech.
  - Board found firing legal: “statements regarding biological differences between the sexes were so harmful, discriminatory, and disruptive as to be unprotected [by free speech...]”
My observations from projects

- Here are some examples of offensive behaviour I have noticed in course projects over the years:
  - Team members using offensive language (profanity)
  - Using sexual test data in their application
  - Belittling or overriding a female teammate's opinions
  - Abrasive/argumentative approach to discussing team decisions

- This type of behaviour is not acceptable in a university or workplace.
  - It gets people fired, and makes other people quit.
What you can do!

- **When you notice offensive behaviour:**
  - People who are offensive can think everyone else agrees with them but are too chicken to say what they really think.
  - Raise the issue to encourage retrospection..

- If it was a joke, ‘turn the tables’ with a comeback:
  - “Better people than you have been fired for less offensive jokes”
  - “If that was supposed to be a joke, shouldn’t it have been funny and not just offensive?”
Call to Action

- An issue when devs are promoted to leaders without training.

- **Formalize hiring and promotion criteria**
  - Remove "gut feeling" to reduce bias.

- **Don't rely on self-nomination or self-evaluation**
  - Men more likely to over-rate themselves

- **Pay attention to biases**
  - Notice your own, and those of others around you
  - Call out your friends, team mates, and instructors!
Summary

- We have biases; **recognize yours**!
- High tech companies can have a culture that **does not make a diverse workforce feel welcome**.
- **Micro-aggressions** degrade a marginalized group
- **Gender diversity** will only get better with all our conscious attention.