



peerigon



**Data Bias: the flaw in
designing for defaults.**

DATA BIAS: DESIGNING FOR DEFAULTS

1. Who am I?
2. What's a data gap and data bias?
3. What's going wrong?
4. Why should you care?
5. What can we all do about it?

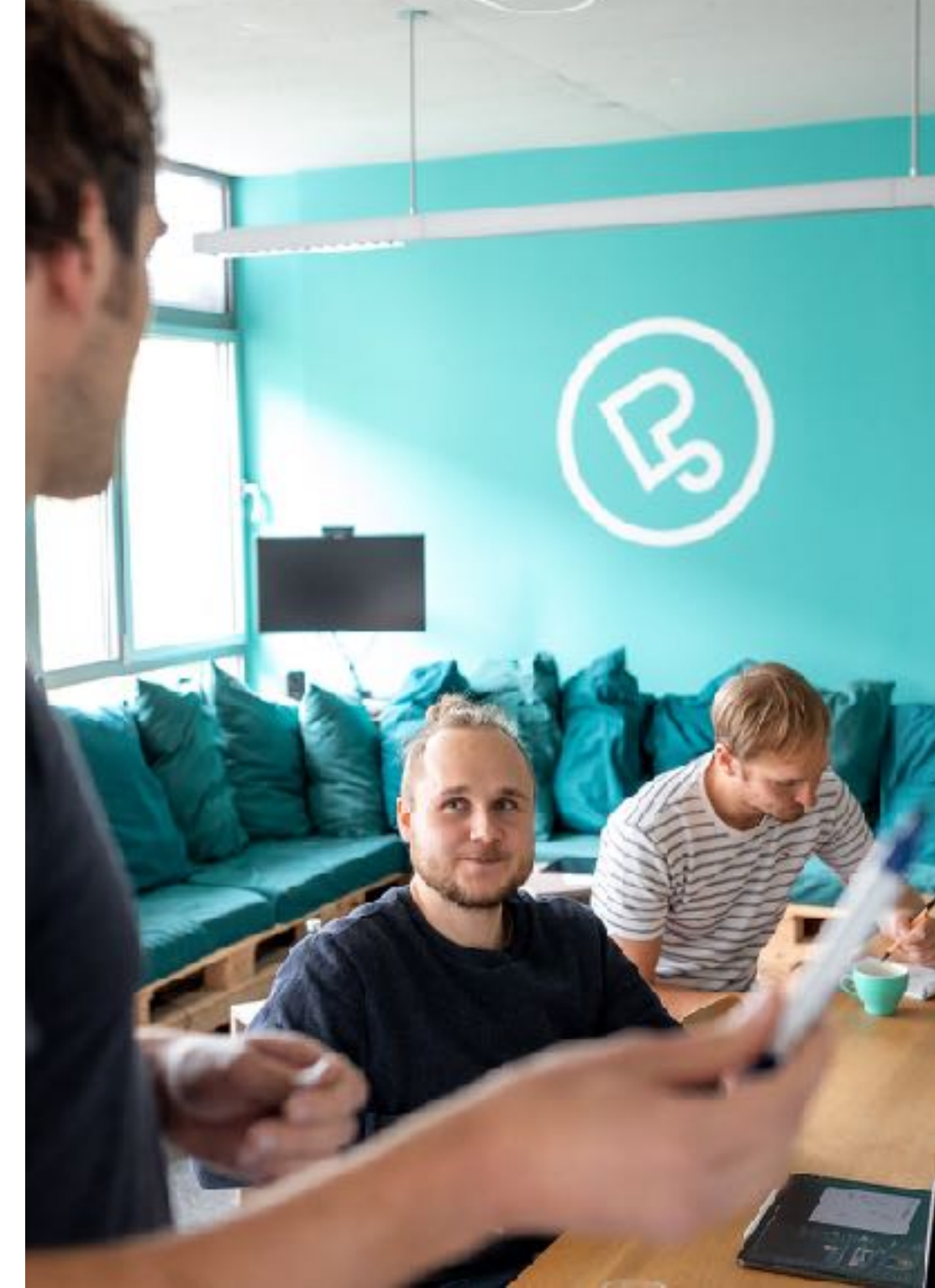
Who am I?

DATA BIAS





Let's
fetch(aCoffee)
together.



Discovering the data gap

“

**If they have a heart attack,
women are 50% more likely to be
misdiagnosed and more likely to
die than a man**

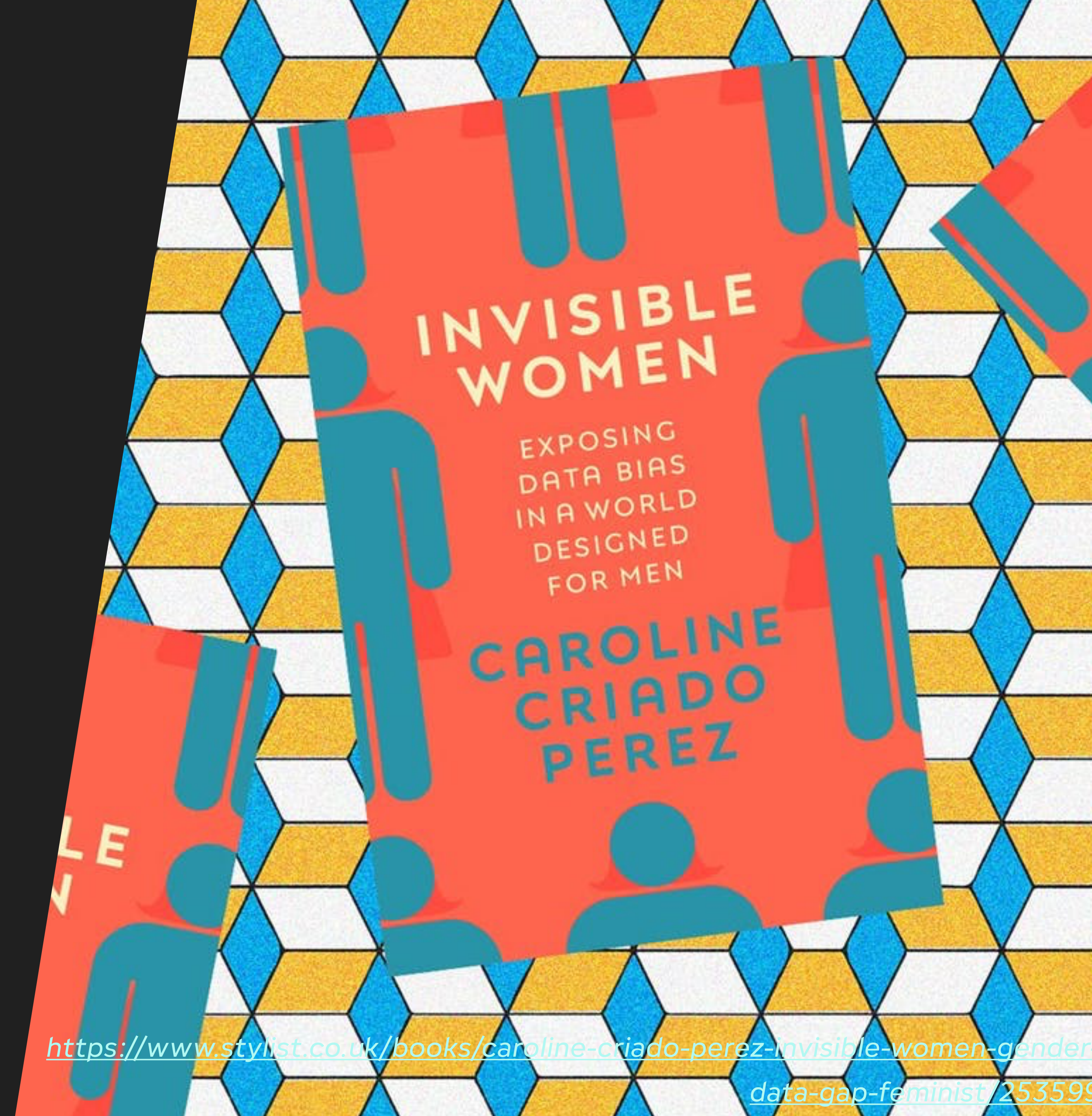


Since Crashtest-Dummies, designed in the 1950s, orient to male proportions, women are 17% more likely to die in a car crash. 2011 a female Dummy was introduced. In two out of three frontal impact tests, it sits in the passenger seat.

DATA BIAS

INVISIBLE WOMEN

- *Gender Data Gap*
- *„Default Male Thinking“*
- *Projection error*



<https://www.stylist.co.uk/books/caroline-criado-perez-invisible-women-gender>

[data-gap-feminist/253599](https://www.stylist.co.uk/books/caroline-criado-perez-invisible-women-gender)

Human bias translates to Data Bias

What's data bias?

DEFINITION OF DATA BIAS

**\ 'DĀ-TƏ 'BĪ-ƏS **

AVAILABLE DATA

**...IS NOT REPRESENTATIVE OF THE POPULATION OR
PHENOMENON OF STUDY**

**...DOES NOT INCLUDE VARIABLES THAT PROPERLY
CAPTURE THE PHENOMENON WE WANT TO PREDICT**

**...INCLUDES CONTENT PRODUCED BY HUMANS
WHICH MAY CONTAIN BIAS AGAINST GROUPS OF
PEOPLE**

Designing for defaults.

DATA BIAS

HARDWARE & DIVERSE TEAMS



DATA BIAS

SOFTWARE & DIVERSE TEAMS



HealthKit

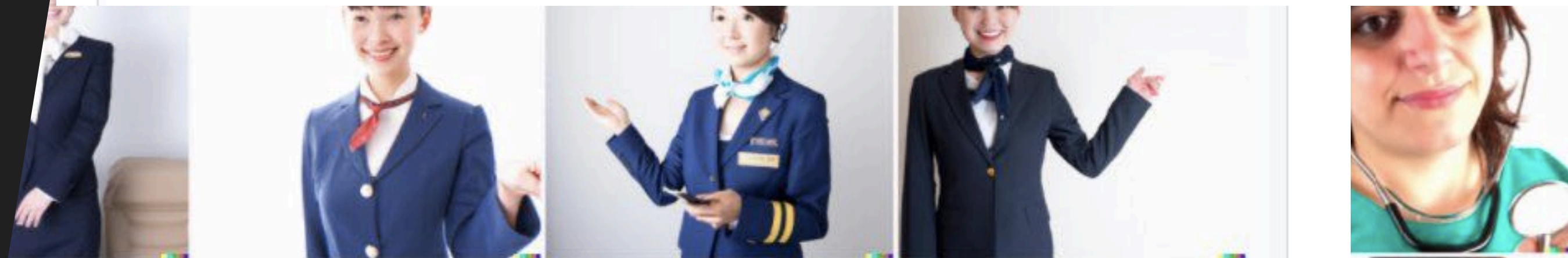
<https://www.theverge.com/2014/9/25/6844021/apple-promised-an-expansive-health-app-so-why-cant-i-track>

bias = dead angle

Machines are dumb.

DATA BIAS

IMAGE GENERATION



DATA BIAS

SKEWED DATA

- *uneven data*
- *unintended correlations*
- *biased collection*

Machine Learning !== Neutral

DATA BIAS

RISKS & LIMITATIONS

„Use of DALL·E 2 has the potential to harm individuals and groups by reinforcing stereotypes, erasing or denigrating them, providing them with disparately low quality performance, or by subjecting them to indignity. These behaviors reflect biases present in DALL·E 2 training data and the way in which the model is trained.“

DALL·E 2 Bias & Representation



DATA BIAS

FAIR ALGORITHMS

Can unbiased data produce biased results?

Fair AI needs fair systems.



Why should you care?

**We should design machines based on
the reality we would like to have.**

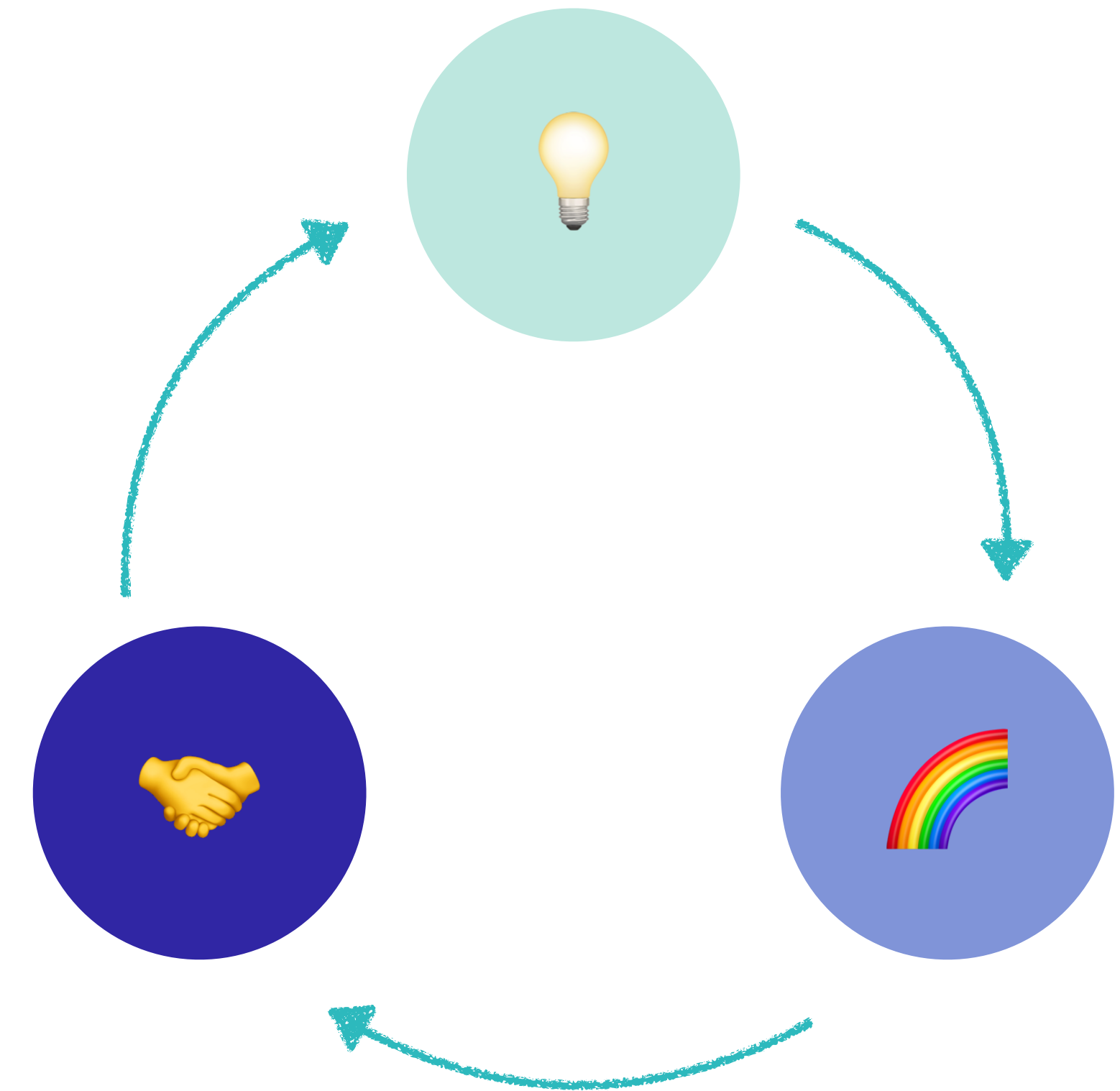
What can we all do about it?

DATA BIAS

RECOGNIZE (YOUR) BIAS

WORK WITH A DIVERSE TEAM

CONTRIBUTE



How to detect a Women's Heart Attack

- ***CHEST PAIN (PRESSURE, SQUEEZING, FULLNESS)***
- ***PAIN IN ONE OR BOTH ARMS, THE BACK, NECK, JAW OR STOMACH***
- ***SHORTNESS OF BREATH***
- ***COLD SWEAT, NAUSEA, VOMITING OR LIGHTHEADEDNESS***

DATA BIAS

MORE ON THE TOPIC

 *Caroline Criado-Perez – Invisible Women (and her newsletter)*

 *Janelle Shane – You Look Like a Thing and I love you*

 *Coded Bias (Netflix)*

 *...and a lot of podcasts*