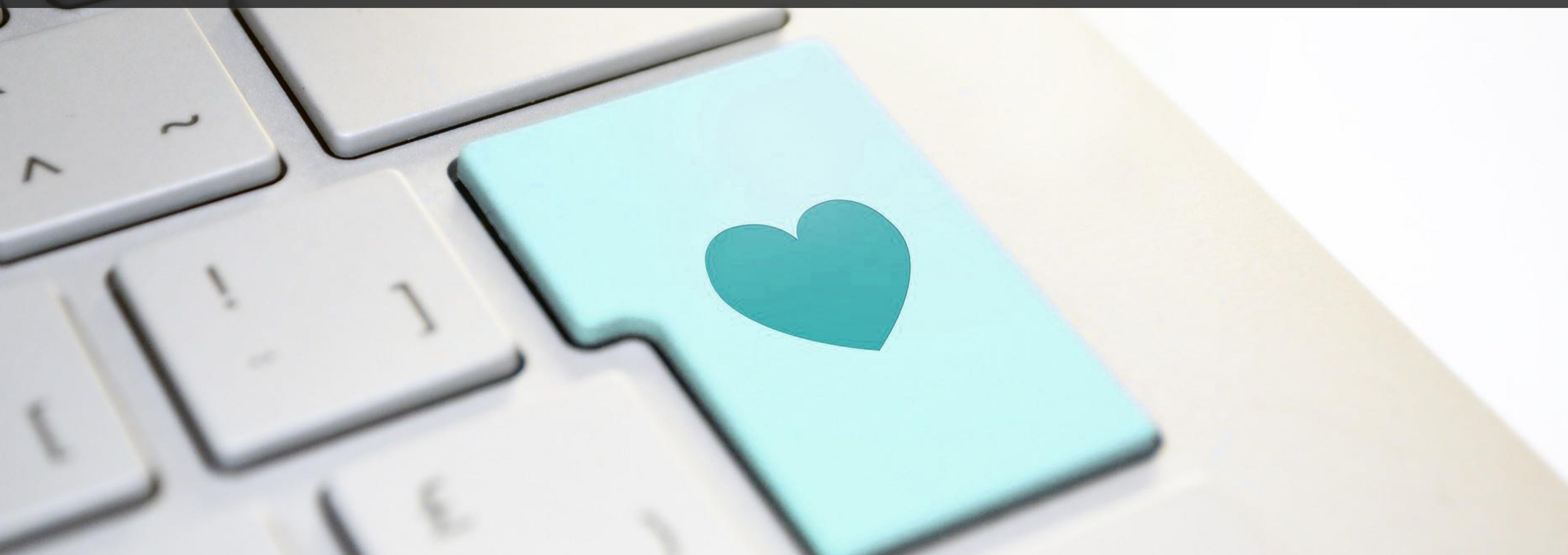


# CONTRIBUTING WITH COMPASSION

LLVM Workshop - October 21, 2019

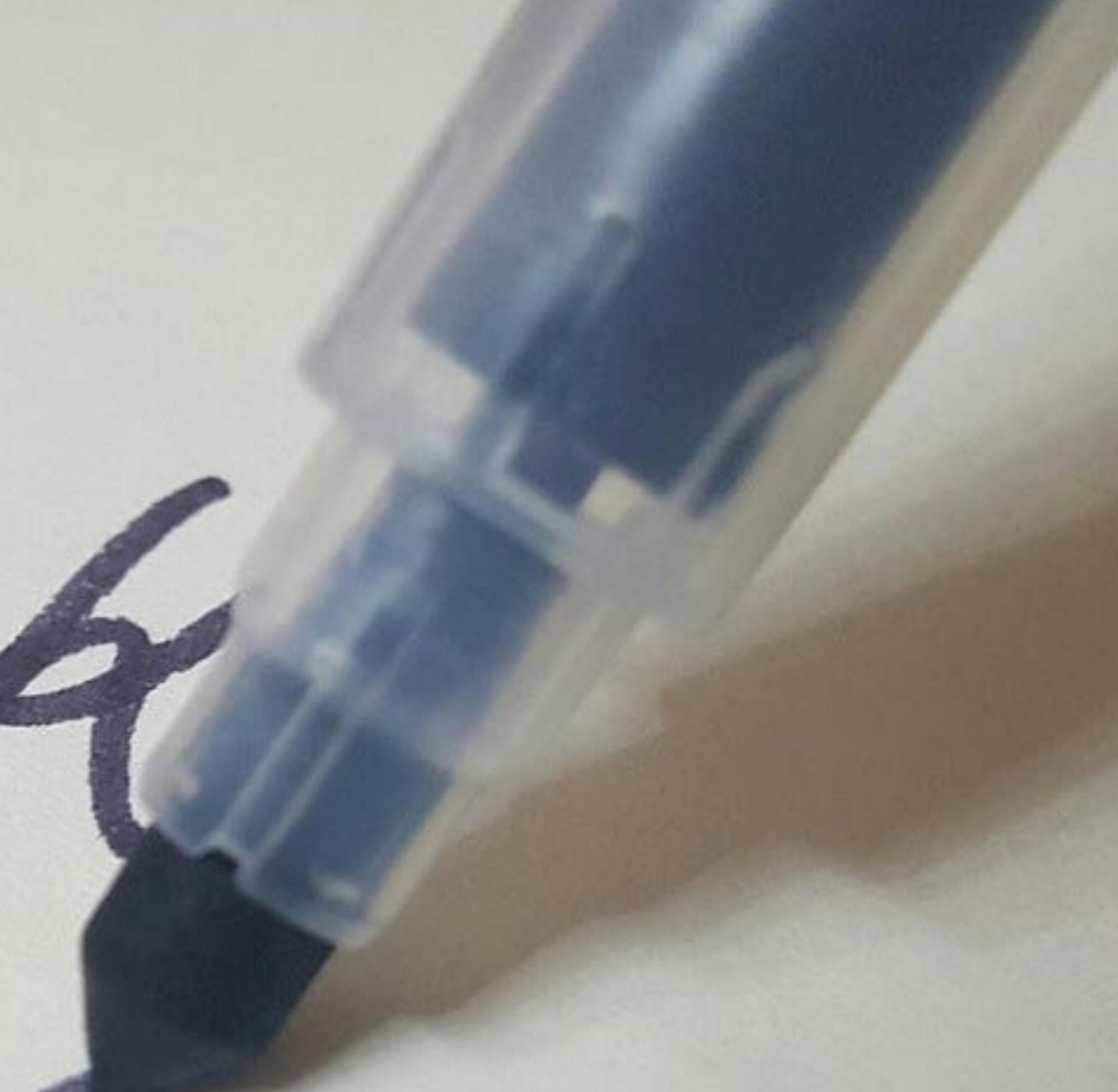


COMPASSIONATE CODING

@APRILWENSEL

@COMPASSIONCODE

Thank you



#COMPASSIONATECODING

@APRILWENSEL



#COMPASSIONATECODING

@APRILWENSEL



**Programmers are having a huge debate over whether they should be required to behave respectfully to each other**

Julie Bort May 6, 2018, 10:00 AM



<http://www.businessinsider.com/programmers-debate-requirements-to-behave-respectfully-ccoc-2018-5>

@APRILWENSEL

Compassionate–Yet Candid–Code Reviews - April Wensel  
<https://www.youtube.com/watch?v=Ea8EiIPZvh0>



#COMPASSIONATECODING

@APRILWENSEL

WHY ISN'T THIS TALK  
PART OF THE MAIN  
DEVELOPER'S MEETING?



#COMPASSIONATECODING

@APRILWENSEL

# MY BACKGROUND



#COMPASSIONATECODING

@APRILWENSEL



# I LOVE TECH



#COMPASSIONATECODING

@APRILWENSEL

# ME: 10 YEARS AS SOFTWARE ENGINEER, LEADER, MENTOR, TEACHER...

**SONY**

**zoodles**

 **Playdom™**



 **leeo**

 **User Testing**

**CARNEGIE  
INSTITUTION FOR  
SCIENCE**

 **cognoa**

 **FIRST®  
LEGO®  
LEAGUE**



**LEVEL PLAYING FIELD  
INSTITUTE**



**Hackbright  
Academy**

 **black girls CODE**  
imagine. build. create.

 **The LEAGUE**  
of Amazing Programmers

 **technovation**



# ALSO ME: KIND OF A JERK



April Wensel  
Speaker | Founder, Compassionate Coding | [compassionatecoding.com](http://compassionatecoding.com)  
Dec 12, 2017

## Confessions of a Recovering Jerk Programmer



<https://medium.com/compassionate-coding/confessions-of-a-recovering-jerk-programmer-b9d531a05ea9>



THERE'S A LOT  
OF SUFFERING  
IN TECH



#COMPASSIONATECODING

@APRILWENSEL

# SUFFERING IN TECH

- STRESS & BURNOUT
- IMPOSTOR SYNDROME
- “TALENT SHORTAGE” MYTH
- LACK OF DIVERSITY
- POOR USER EXPERIENCE
- UNETHICAL PRODUCTS
- FAILED PROJECTS



TECH CULTURE  
CAN BE

TOXIC



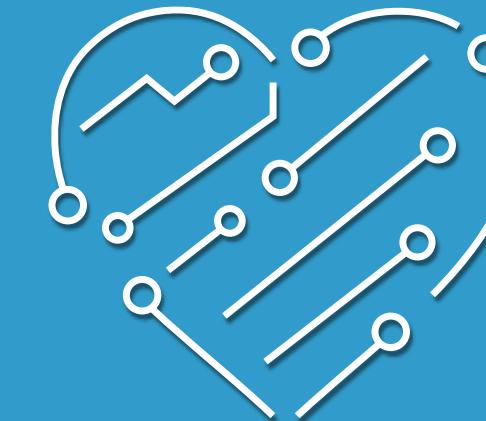
#COMPASSIONATECODING

@APRILWENSEL

IN 2016, I BECAME VEGAN,  
LEARNED ABOUT COMPASSION,  
AND STARTED A CONSCIOUS  
BUSINESS TO TRANSFORM  
TECH CULTURE:



Vegan  
Chicken  
Tikka Masala  
pizza from  
Bossman's in  
San Jose



COMPASSIONATE  
CODING



#COMPASSIONATECODING

@APRILWENSEL

# WHY COMPASSION?



#COMPASSIONATECODING

@APRILWENSEL

# WHY COMPASSION?

## THE REDDIT RESPONSE:

↑ It's a girly title so ...  
↓

I also don't understand why coding has to be "compassionate"?

↑ I like the post, but 'Compassionate Coding' still sounds like self help nonsense :P  
↓



#COMPASSIONATECODING

@APRILWENSEL



**COMPASSION ≠ ‘SUGARCOATING’**



#COMPASSIONATECODING

@APRILWENSEL



**COMPASSION ≠ BEING A DOORMAT**

@COMPASSIONCODE

# COMPASSION

“THE FEELING THAT ARISES WHEN YOU  
ARE CONFRONTED WITH ANOTHER'S  
SUFFERING AND FEEL MOTIVATED TO  
RELIEVE THAT SUFFERING”

—UC BERKELEY'S GREATER GOOD SCIENCE CENTER

<https://greatergood.berkeley.edu/topic/compassion/definition>



#COMPASSIONATECODING

@APRILWENSEL

**COMPASSION = EMPATHY + ACTION**



#COMPASSIONATECODING

@APRILWENSEL

# COMPASSIONATE CODING MISSION:

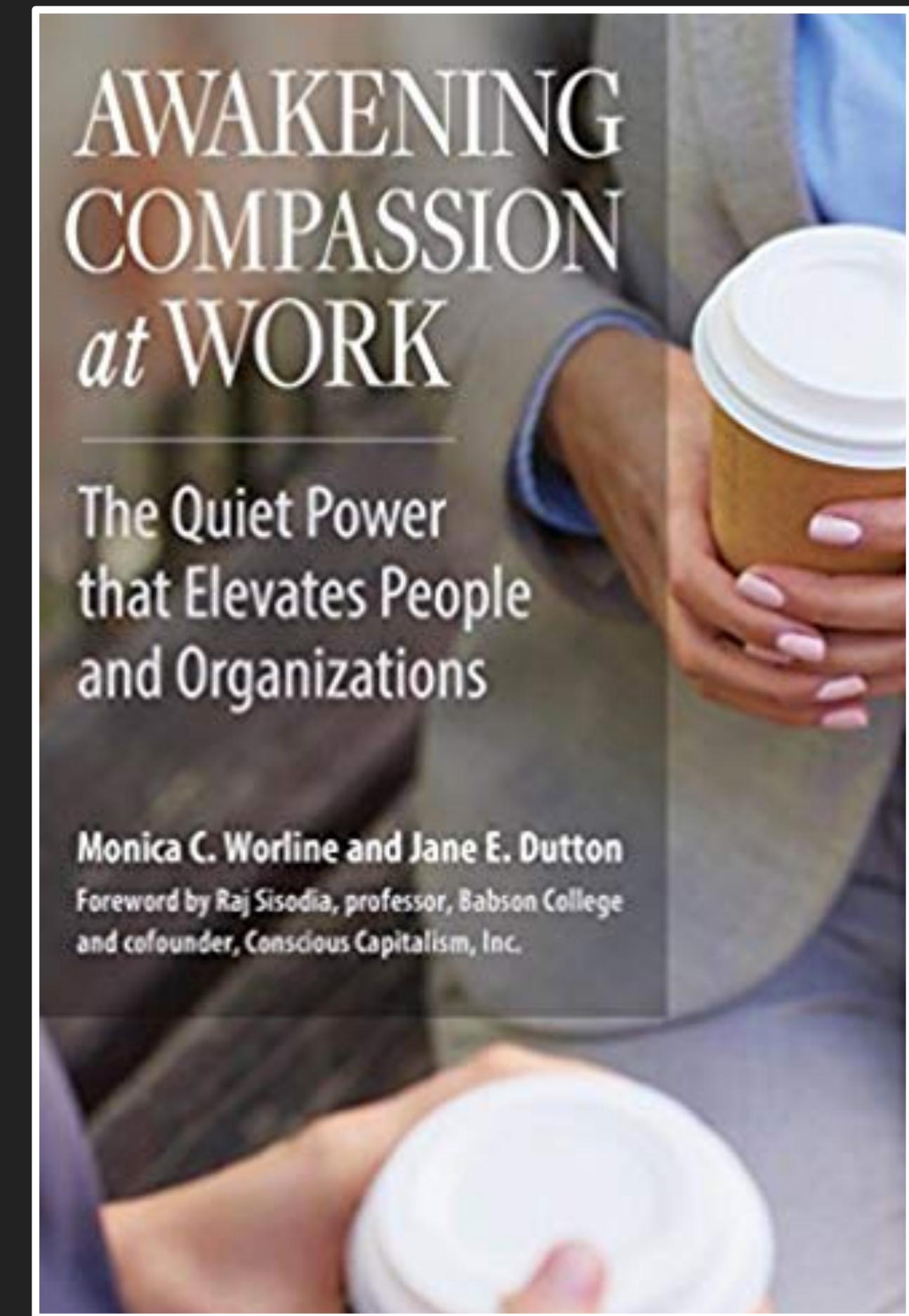
## MINIMIZE SUFFERING FOR TECHNOLOGISTS, USERS, AND THE GLOBAL COMMUNITY



#COMPASSIONATECODING

@APRILWENSEL

COMPASSIONATE BUSINESS UNITS “EXHIBITED BETTER FINANCIAL PERFORMANCE... AND THESE UNITS REALIZED HIGHER EMPLOYEE AND CUSTOMER RETENTION...”



PRIORITIZING FEATURES  
COLLABORATING  
INTERVIEWING  
NAMING VARIABLES

...



#COMPASSIONATECODING

@APRILWENSEL

“IT’S SIMPLY NOT ENOUGH FOR INSTITUTIONS  
CREATED BY AND FOR MEN TO OPEN THEIR  
DOORS TO WOMEN. MUCH MORE NEEDS TO  
CHANGE—THE NORMS, THE PRACTICES, AND THE  
FACE OF ITS LEADERSHIP—TO CREATE A PLACE  
WHERE WOMEN CAN TRULY SUCCEED.”

TARA MOHR  
*Playing Big*



#COMPASSIONATECODING

@APRILWENSEL

Programming today is exactly what you'd expect to get by paying an isolated subculture of nerdy young men to entertain themselves for fifty years. You get a cross between Dungeons & Dragons and Rubik's Cube, elaborated a thousand-fold. I'm serious: Dungeons & Dragons requires mastery of an encyclopedia of minutiae; Rubik's Cube is a puzzle requiring abstract mathematical thinking. That is programming in a nutshell. As a bonus you also get a toxic culture of intellectual one-upmanship.

JONATHAN EDWARDS

*<https://alarmingdevelopment.org/?p=1173>*



#COMPASSIONATECODING

@APRILWENSEL

# NEW COMPASSIONATE TECH VALUES

- ▶ EGO HUMILITY
- ▶ ELITISM INCLUSION
- ▶ COMPETITION COOPERATION
- ▶ BEING “SMART” LEARNING
- ▶ BEING A “ROCKSTAR” BEING A MENTOR



I BELIEVE THAT YOU  
ARE ALL GOOD PEOPLE  
WHO DEEP DOWN  
VALUE INCLUSION



#COMPASSIONATECODING

@APRILWENSEL

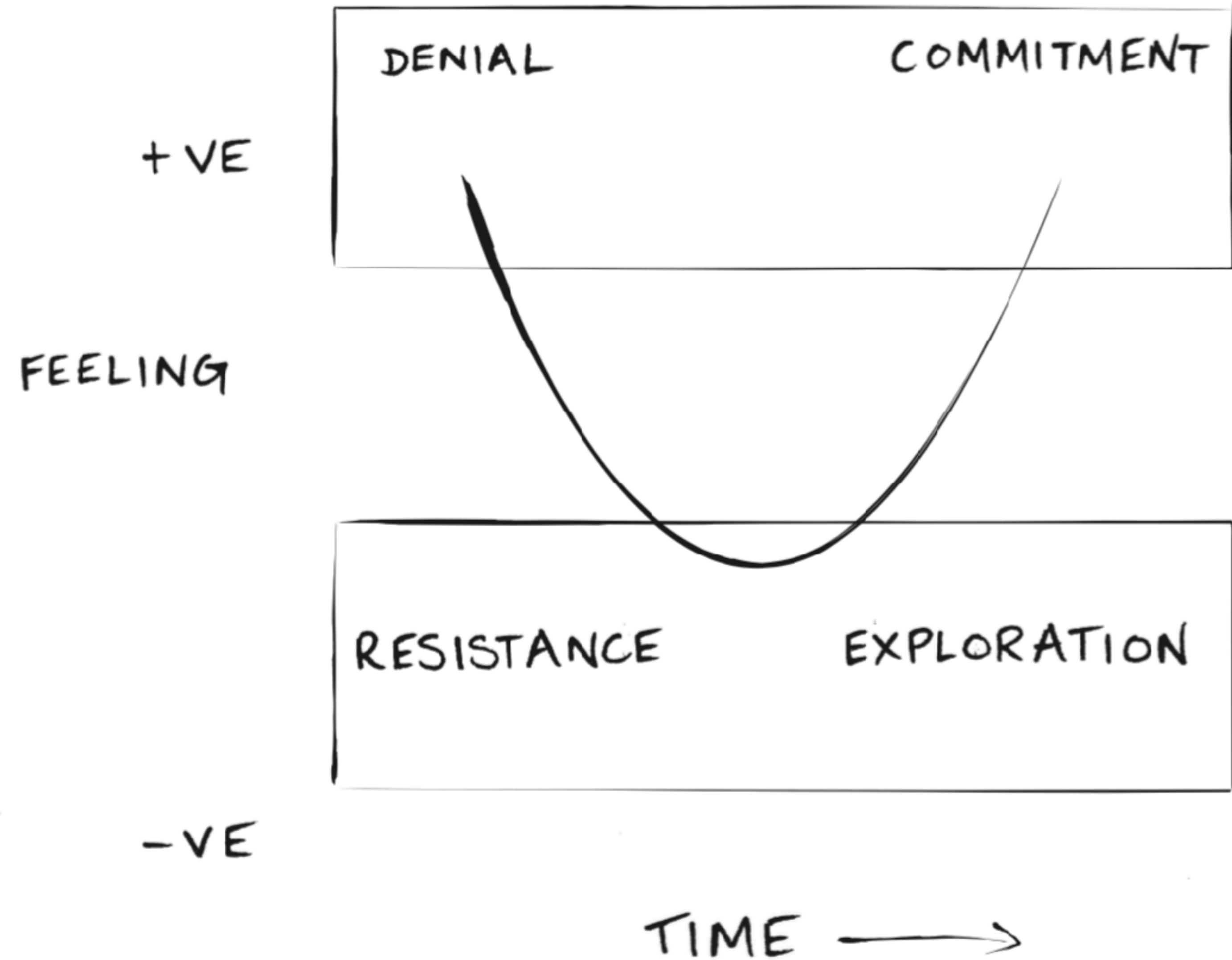
BECOMING MORE  
INCLUSIVE REQUIRES  
CHANGE



#COMPASSIONATECODING

@APRILWENSEL

# CHANGE CAN BE HARD



TIRED OF HEARING  
ABOUT DIVERSITY?



#COMPASSIONATECODING

@APRILWENSEL



[https://commons.wikimedia.org/wiki/File:Wood\\_warping.png](https://commons.wikimedia.org/wiki/File:Wood_warping.png)

Metaphor from Steven Sample's *Contrarian Guide to Leadership*



#COMPASSIONATECODING

@APRILWENSEL

# THE PETRIE MULTIPLIER

Ratio women to men: 1:4

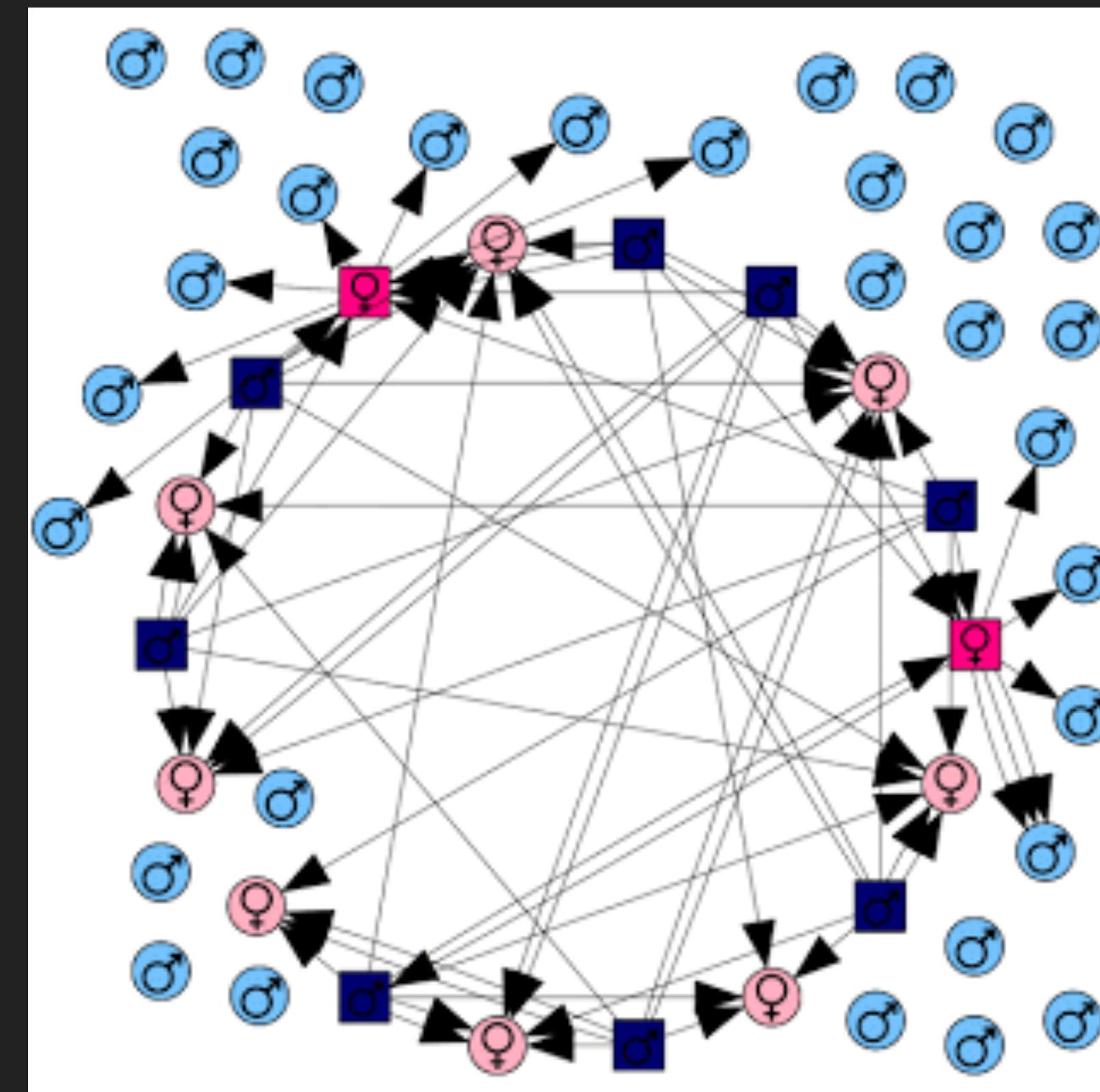
Each person equally likely to make inappropriate remarks to the other gender

4x as many men to make remarks

4x fewer women to receive them

So, women get 16x as many inappropriate remarks

$1:r \rightarrow r^2$  times



Karen Petrie; [http://blog.ian.gent/2013/10/  
the-petrie-multiplier-why-attack-on.html](http://blog.ian.gent/2013/10/the-petrie-multiplier-why-attack-on.html)



#COMPASSIONATECODING

@APRILWENSEL

HAVING A CODE OF  
CONDUCT IS THE  
BARE MINIMUM



#COMPASSIONATECODING

@APRILWENSEL

YOU AS AN INDIVIDUAL  
HAVE THE POWER TO  
BECOME AN AGENT OF  
COMPASSION



#COMPASSIONATECODING

@APRILWENSEL

"I BELIEVE IT IS IN EVERYONE'S  
INTEREST THAT PEOPLE CHANGE, NOT  
IN ORDER TO AVOID PUNISHMENT,  
BUT BECAUSE THEY SEE THE CHANGE  
AS BENEFITING THEMSELVES."

MARSHALL ROSENBERG  
*Nonviolent Communication*



#COMPASSIONATECODING

@APRILWENSEL

COMPASSION IS GOOD FOR  
YOU



#COMPASSIONATECODING

@APRILWENSEL

# BENEFITS OF COMPASSION

<https://greatergood.berkeley.edu/topic/compassion/definition#why-practice>

- ▶ JOY
- ▶ RESILIENCE
- ▶ PEACE OF MIND
- ▶ JOB SATISFACTION
- ▶ LOWER CHANCE OF BURNOUT



#COMPASSIONATECODING

@APRILWENSEL



# THREE EXAMPLES OF PRACTICAL COMPASSION



#COMPASSIONATECODING

@APRILWENSEL

# THE PRIME DIRECTIVE

“REGARDLESS OF WHAT WE DISCOVER,  
WE UNDERSTAND AND TRULY BELIEVE  
THAT EVERYONE DID THE BEST JOB THEY  
COULD, GIVEN WHAT THEY KNEW AT THE  
TIME, THEIR SKILLS AND ABILITIES, THE  
RESOURCES AVAILABLE, AND THE  
SITUATION AT HAND.”

[https://retrospectivewiki.org/index.php?title=The\\_Prime\\_Directive](https://retrospectivewiki.org/index.php?title=The_Prime_Directive)



#COMPASSIONATECODING

@APRILWENSEL



1

# APPLY COMPASSION IN AND AROUND THE CODE



#COMPASSIONATECODING

@APRILWENSEL

in normal function call expressions and function-like macros. For example, this is good:

```
if (X) ...
for (I = 0; I != 100; ++I) ...
while (LLVMRocks) ...

somefunc(42);
assert(3 != 4 && "laws of math are failing me");

A = foo(42, 92) + bar(X);
```

and this is bad:

```
if(X) ...
for(I = 0; I != 100; ++I) ...
while(LLVMRocks) ...

somefunc (42);
assert (3 != 4 && "laws of math are failing me");

A = foo (42, 92) + bar (X);
```

<https://llvm.org/docs/CodingStandards.html>



#COMPASSIONATECODING

@APRILWENSEL

BINARY THINKING  
BLOCKS EMPATHY



#COMPASSIONATECODING

@APRILWENSEL

AVOID  
GOOD/BAD  
LANGUAGE



#COMPASSIONATECODING

@APRILWENSEL

Wrong:

```
// In Something.h:  
  
/// Something - An abstraction for some complicated thing.  
class Something {  
public:  
    /// fooBar - Does foo and bar.  
    void fooBar();  
};  
  
// In Something.cpp:  
  
/// fooBar - Does foo and bar.  
void Something::fooBar() { ... }
```

Correct:

```
// In Something.h:  
  
/// An abstraction for some complicated thing.  
class Something {  
public:  
    /// Does foo and bar.  
    void fooBar();  
};  
  
// In Something.cpp:  
  
// Builds a B-tree in order to do foo. See paper by...  
void Something::fooBar() { ... }
```

<https://llvm.org/docs/CodingStandards.html>



#COMPASSIONATECODING

@APRILWENSEL

AVOID  
RIGHT/WRON  
G  
LANGUAGE



#COMPASSIONATECODING

@APRILWENSEL

“YOU’RE DOING IT  
WRONG. . . .”



#COMPASSIONATECODING

@APRILWENSEL

In general, we strive to reduce indentation wherever possible. This is useful because we want code to [fit into 80 columns](#) without wrapping horribly, but also because it makes it easier to understand the code. To facilitate this and avoid some insanely deep nesting on occasion, don't indent namespaces. If it helps readability, feel free to add a comment indicating what namespace is being closed by a `}`. For example:

<https://llvm.org/docs/CodingStandards.html>



In general, we strive to reduce indentation wherever possible. This is useful because we want code to fit into 80 columns without wrapping horribly, but also because it makes it easier to understand the code. To facilitate this and avoid some insanely deep nesting on occasion, don't indent namespaces. If it helps readability, feel free to add a comment indicating what namespace is being closed by a }. For example:

<https://llvm.org/docs/CodingStandards.html>



#COMPASSIONATECODING

@APRILWENSEL

**1. When writing C code: Obviously if you are writing C code, use C style comments.**

<https://llvm.org/docs/CodingStandards.html>



#COMPASSIONATECODING

@APRILWENSEL

OBVIOUS TO  
WHOM?



#COMPASSIONATECODING

@APRILWENSEL

Poorly-chosen names can mislead the reader and cause bugs. We cannot stress enough how important it is to use *descriptive* names. Pick names that match the semantics and role of the underlying entities, within reason. Avoid abbreviations unless they are well known. After picking a good name, make sure to use consistent capitalization for the name, as inconsistency requires clients to either memorize the APIs or to look it up to find the exact spelling.

<https://llvm.org/docs/CodingStandards.html>



#COMPASSIONATECODING

@APRILWENSEL

INSTEAD OF JUST  
FOLLOWING “BEST  
PRACTICES.” THINK ABOUT  
MINIMIZING SUFFERING



#COMPASSIONATECODING

@APRILWENSEL

Wrong:

```
// In Something.h:  
  
/// Something - An abstraction for some complicated thing.  
class Something {  
public:  
    /// fooBar - Does foo and bar.  
    void fooBar();  
};  
  
// In Something.cpp:  
  
/// fooBar - Does foo and bar.  
void Something::fooBar() { ... }
```

Correct:

```
// In Something.h:  
  
/// An abstraction for some complicated thing.  
class Something {  
public:  
    /// Does foo and bar.  
    void fooBar();  
};  
  
// In Something.cpp:  
  
// Builds a B-tree in order to do foo. See paper by...  
void Something::fooBar() { ... }
```

<https://llvm.org/docs/CodingStandards.html>



#COMPASSIONATECODING

@APRILWENSEL

AVOID DERIVATIVES  
OF FUBAR



#COMPASSIONATECODING

@APRILWENSEL

# AVOID RTFM AND THE ASSOCIATED ATTITUDE

<https://llvm.org/docs/Contributing.html>



#COMPASSIONATECODING

@APRILWENSEL



MEDIA SERVICES BLOG SHOP

WORK WITH US

# It's Time to Retire "RTFM"

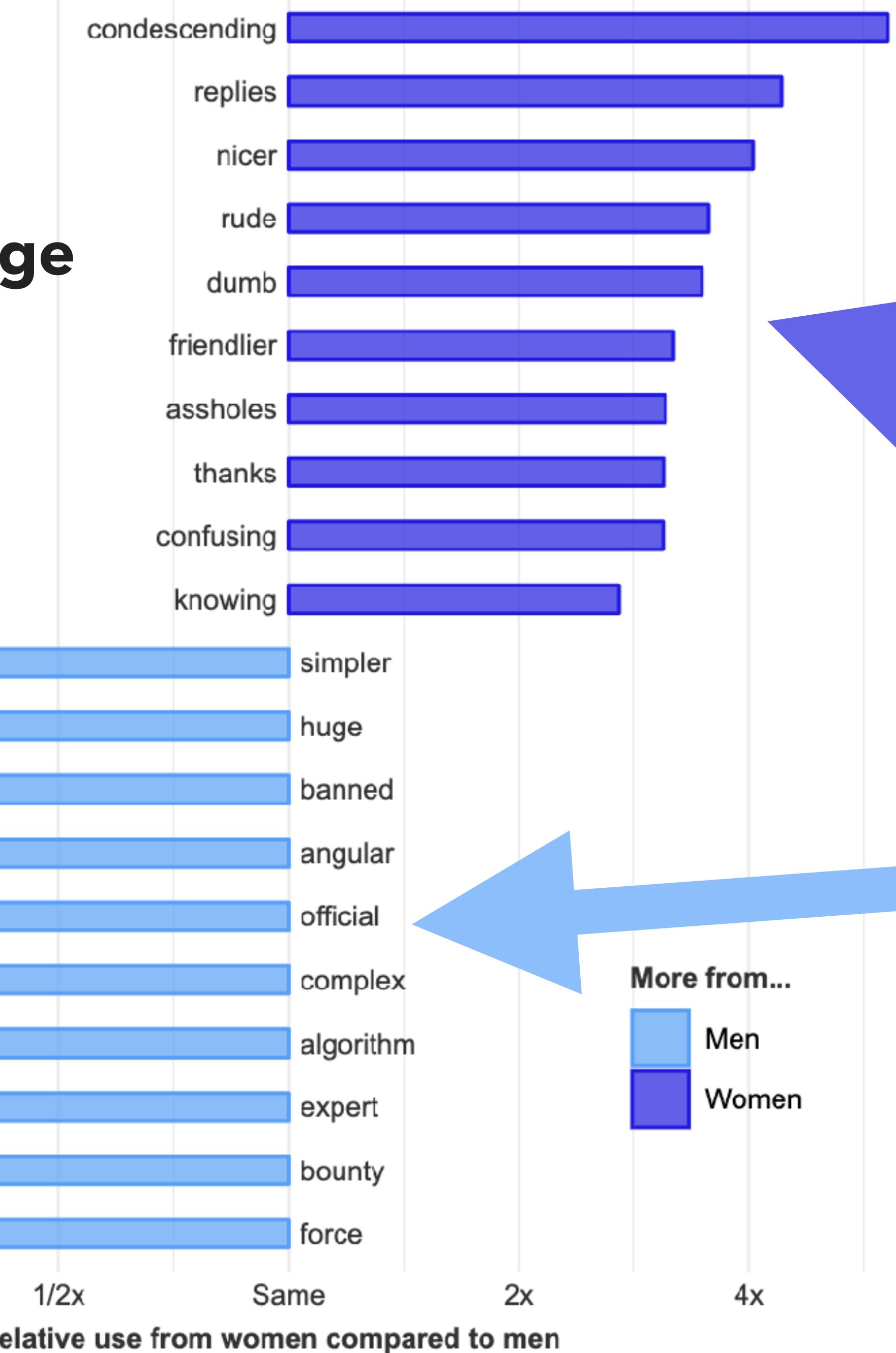
<https://compassionatecoding.com/blog/2019/4/17/its-time-to-retire-rtfm>



#COMPASSIONATECODING

@APRILWENSEL

# What one thing would you change about Stack Overflow?



<https://insights.stackoverflow.com/survey/2019#community>

**Women want more kindness in communication**

**Men want changes to points algorithm**



1

# APPLY COMPASSION IN AND AROUND THE CODE



#COMPASSIONATECODING

@APRILWENSEL



# TOPPLE THE TYRANNY OF “TECHNICAL”



#COMPASSIONATECODING

@APRILWENSEL

**“TECHNICAL” > “NON-TECHNICAL”**



#COMPASSIONATECODING

@APRILWENSEL

**“TECHNICAL” > “NON-TECHNICAL”**

?????????



#COMPASSIONATECODING

@APRILWENSEL

“HARD” SKILLS > “SOFT” SKILLS

?????????



#COMPASSIONATECODING

@APRILWENSEL



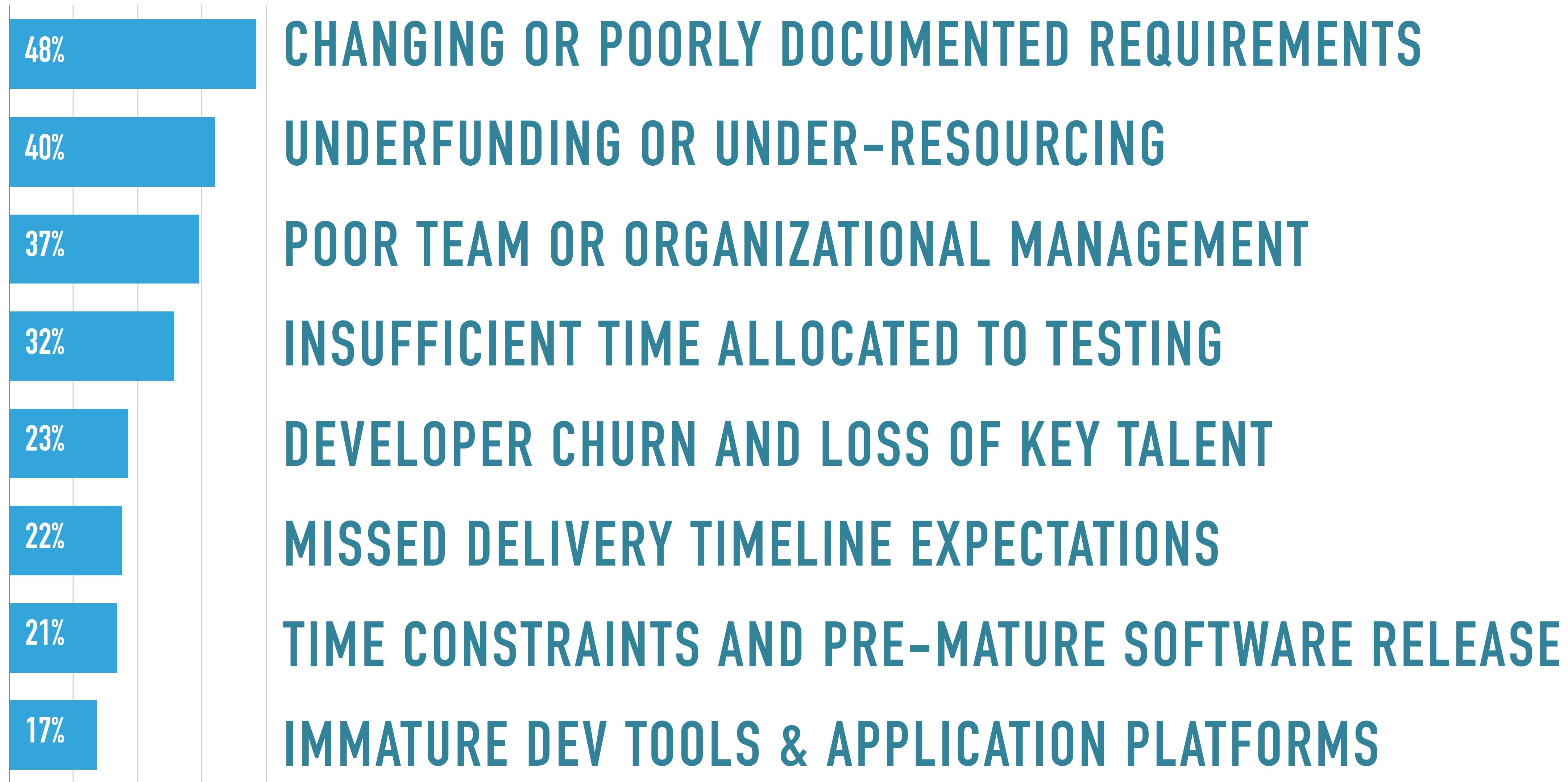
# WHY DO PROJECTS FAIL?



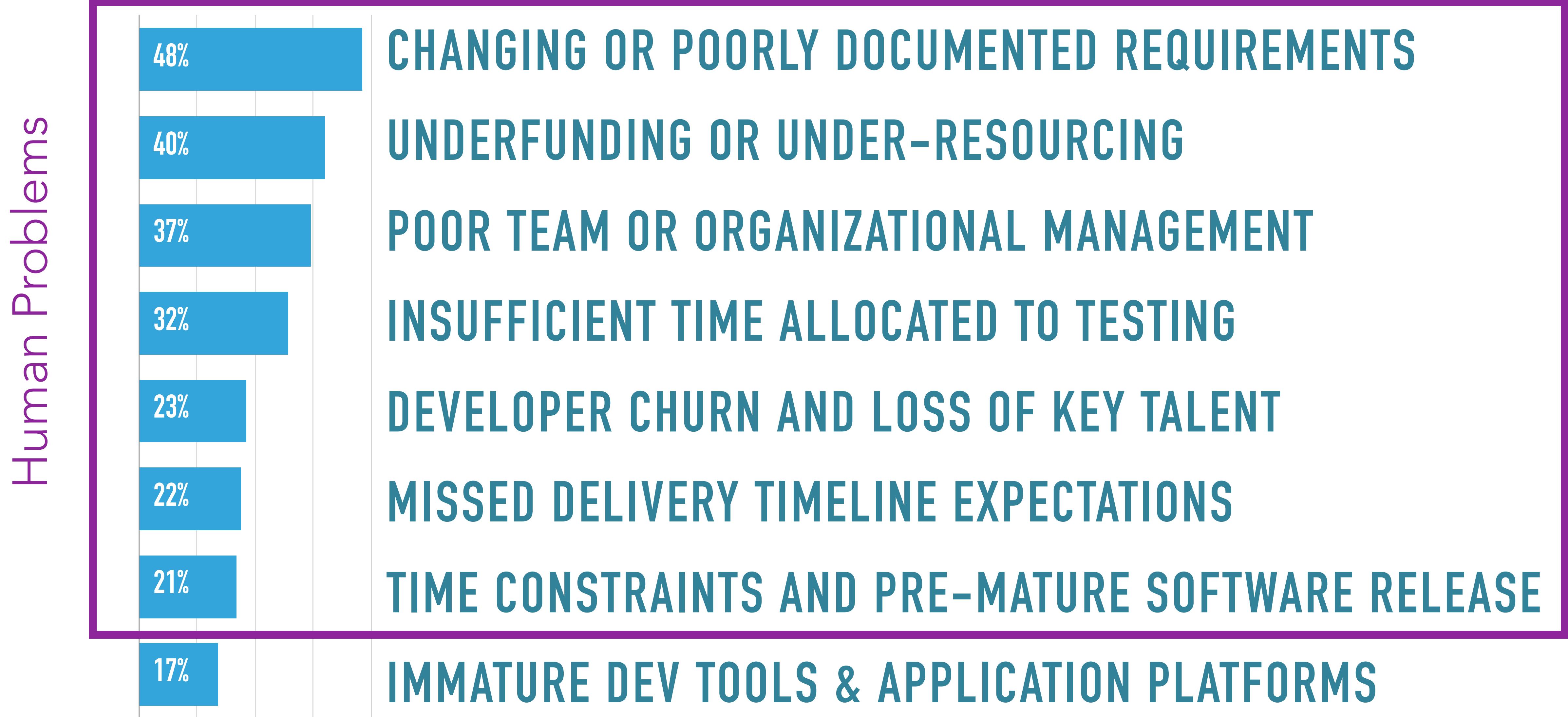
#COMPASSIONATECODING

@APRILWENSEL

# WHY SOFTWARE PROJECTS FAIL



# WHY SOFTWARE PROJECTS FAIL



<https://www.developersalliance.org/developer-insights-report-2015/>

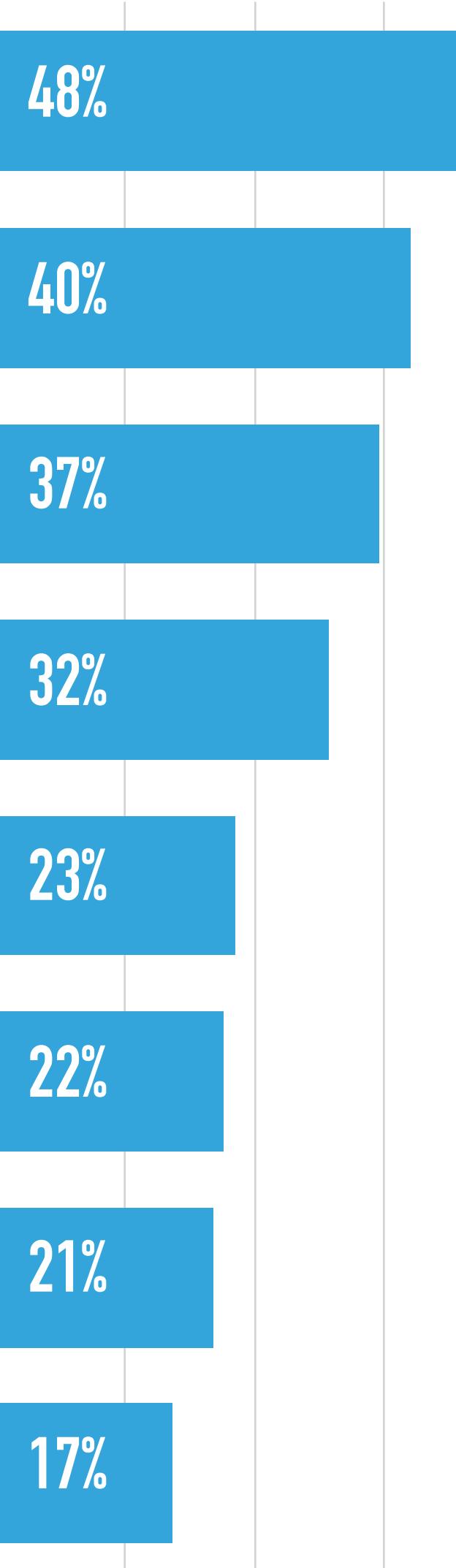


#COMPASSIONATECODING

@APRILWENSEL

# WHY SOFTWARE PROJECTS FAIL

Human Problems



- CHANGING OR POORLY DOCUMENTED REQUIREMENTS
- UNDERFUNDING OR UNDER-RESOURCING
- POOR TEAM OR ORGANIZATIONAL MANAGEMENT
- INSUFFICIENT TIME ALLOCATED TO TESTING
- DEVELOPER CHURN AND LOSS OF KEY TALENT
- MISSED DELIVERY TIMELINE EXPECTATIONS
- TIME CONSTRAINTS AND PRE-MATURE SOFTWARE RELEASE
- IMMATURE DEV TOOLS & APPLICATION PLATFORMS



#COMPASSIONATECODING

<https://www.developersalliance.org/developer-insights-report-2015/>

@APRILWENSEL

ALL SOFTWARE  
PROBLEMS  
ARE ACTUALLY  
HUMAN  
PROBLEMS



#COMPASSIONATECODING

@APRILWENSEL



MEDIA

SERVICES

BLOG

SHOP

WORK WITH US

# If You Can Use a Fork, You're "Technical"

<https://compassionatecoding.com/blog/2019/4/17/if-you-can-use-a-fork-youre-technical>



#COMPASSIONATECODING

@APRILWENSEL

“SHE DOESN’T  
SEEM TECHNICAL  
ENOUGH . . .”



#COMPASSIONATECODING

@APRILWENSEL

**“TECHNICAL” IS  
CONNECTED TO  
DEVELOPER  
STEREOTYPES**



#COMPASSIONATECODING

@APRILWENSEL

OBSSESSION WITH  
“STAYING TECHNICAL”  
LEADS TO ODD  
BEHAVIOR



#COMPASSIONATECODING

@APRILWENSEL

**“I’M JUST NOT  
TECHNICAL...”**



#COMPASSIONATECODING

@APRILWENSEL

THE FALSE TECHNICAL/  
NON-TECHNICAL  
DIVISION LIMITS OUR  
POTENTIAL



#COMPASSIONATECODING

@APRILWENSEL

THE FALSE TECHNICAL/NON-  
TECHNICAL DIVISION  
PREVENTS US FROM  
DISCUSSING IMPORTANT  
PROBLEMS IN OUR  
COMMUNITIES



#COMPASSIONATECODING

@APRILWENSEL

WHY ISN'T THIS TALK  
PART OF THE MAIN  
DEVELOPER'S MEETING?



#COMPASSIONATECODING

@APRILWENSEL

## What can you expect at an LLVM Developers' Meeting?

### **Technical Talks**

These 20-30 minute talks cover all topics from core infrastructure talks, to projects using LLVM's infrastructure. Attendees will take away technical information that could be pertinent to their project or general interest.

### **Tutorials**

Tutorials are 50-60 minute sessions that dive down deep into a technical topic. Expect in depth examples and explanations.



## What can you expect at an LLVM Developers' Meeting?

### **Technical Talks**

These 20-30 minute talks cover all topics from core infrastructure talks, to projects using LLVM's infrastructure. Attendees will take away technical information that could be pertinent to their project or general interest.

### **Tutorials**

Tutorials are 50-60 minute sessions that dive down deep into a technical topic. Expect in depth examples and explanations.



THIS IS A  
TECHNICAL TALK!



#COMPASSIONATECODING

@APRILWENSEL

INSTEAD OF “TECHNICAL”  
OR “NON-TECHNICAL,”  
SAY WHAT YOU REALLY  
MEAN



#COMPASSIONATECODING

@APRILWENSEL

INSTEAD OF  
“SHE'S TECHNICAL,”  
TRY  
“SHE CODES”



#COMPASSIONATECODING

@APRILWENSEL

INSTEAD OF  
“NON-TECHNICAL SKILLS”  
TRY  
“CATALYTIC SKILLS”



#COMPASSIONATECODING

@APRILWENSEL

a non-technical introduction to compiler construction.

<https://compilers.iecc.com/crenshaw/>



#COMPASSIONATECODING

@APRILWENSEL

a non-technical introduction to compiler construction.

“a beginner’s guide...”

“a gentle introduction...”

“an approachable introduction...”

<https://compilers.iecc.com/crenshaw/>



#COMPASSIONATECODING

@APRILWENSEL



# TOPPLE THE TYRANNY OF “TECHNICAL”



#COMPASSIONATECODING

@APRILWENSEL



# TAKE GOOD CARE OF YOURSELF



#COMPASSIONATECODING

@APRILWENSEL



#COMPASSIONATECODING

@APRILWENSEL

# PRACTICE SELF-COMPASSION



#COMPASSIONATECODING

@APRILWENSEL



I'm an idiot

Mcdostone committed to [Mcdostone/basics-web-apps](#) 3 days ago



b88149e



I'm an idiot

AverageMarcus committed to [AverageMarcus/hackathons-uk-bot](#) 10 days ago



fa231aa



I'm an idiot

MacLeodMike committed to [MacLeodMike/puppet-puppetserver](#) 12 days ago



53ec7af



I'm an idiot

acdenisSK committed to [acdenisSK/kitty](#) 16 days ago



a952635



I'm an idiot

kayoslab committed to [kayoslab/swt-drk-stockManagement](#) 16 days ago



31e0a75

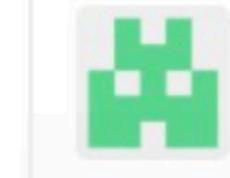


I'm an idiot.

Zuhayr committed to [Yonaguni/EuropaStation](#) 19 days ago



b8f73ae



I'm an idiot

cdorsey committed to [cdorsey/organicbot](#) 18 days ago



876f11a



IF WE'RE NOT KIND  
TO OURSELVES, IT'S  
HARD TO BE KIND TO  
OTHERS



#COMPASSIONATECODING

@APRILWENSEL

"STRESS HORMONES THAT CIRCULATE CHRONICALLY IN OUR BODIES MAY BE TEMPORARILY ENERGIZING, BUT OVER TIME THEY PROMPT SYMPTOMS SUCH AS HYPERACTIVITY, AGGRESSIONESS, IMPATIENCE, IRRITABILITY, ANGER, SELF-ABSORPTION AND INSENSITIVITY TO OTHERS."

JIM LOEHR & TONY SCHWARTZ  
*The Power of Full Engagement*



#COMPASSIONATECODING

@APRILWENSEL

"...SOMETIMES YOU WILL REMEMBER  
THAT...YOU HAVE BEHAVED UNKINDLY AND  
INCONSIDERATELY. AT THIS POINT...HAVE  
**COMPASSION FOR YOURSELF**, SMILE WRYLY  
AT YOUR OMISSION, AND RESOLVE TO DO  
BETTER TOMORROW."

KAREN ARMSTRONG  
*Twelve Steps to a Compassionate Life*



#COMPASSIONATECODING

@APRILWENSEL

DON'T BE AFRAID TO  
ADMIT MISTAKES - WE'RE  
ALL BIASED



#COMPASSIONATECODING

@APRILWENSEL

# FOCUS ON GROWTH



#COMPASSIONATECODING

@APRILWENSEL

# SPECIAL NOTE TO THE UNDERREPRESENTED



#COMPASSIONATECODING

@APRILWENSEL



# TAKE GOOD CARE OF YOURSELF



#COMPASSIONATECODING

@APRILWENSEL



1. APPLY COMPASSION IN AND AROUND THE CODE
2. TOPPLE THE TYRANNY OF “TECHNICAL”
3. TAKE GOOD CARE OF YOURSELF



#COMPASSIONATECODING

@APRILWENSEL

PROMOTING INCLUSION IS  
NOT LOWERING THE BAR;  
IT'S REALIZING THAT WE'VE  
BEEN MISSING OUT ON  
DIVERSE STRENGTHS AND  
DECIDING TO FIX THAT



#COMPASSIONATECODING

@APRILWENSEL



#COMPASSIONATECODING

@APRILWENSEL

WHY ISN'T THIS TALK PART  
OF THE MAIN DEVELOPER'S  
MEETING?



#COMPASSIONATECODING

@APRILWENSEL

**"BECAUSE THAT'S FOR  
TECHNICAL TALKS."**



#COMPASSIONATECODING

@APRILWENSEL

"IF IT IS NOT TEMPERED BY  
COMPASSION AND EMPATHY, REASON  
CAN LEAD MEN AND WOMEN INTO A  
MORAL VOID."

KAREN ARMSTRONG  
*Twelve Steps to a Compassionate Life*



#COMPASSIONATECODING

@APRILWENSEL

WHAT WILL YOU DO  
ABOUT IT?

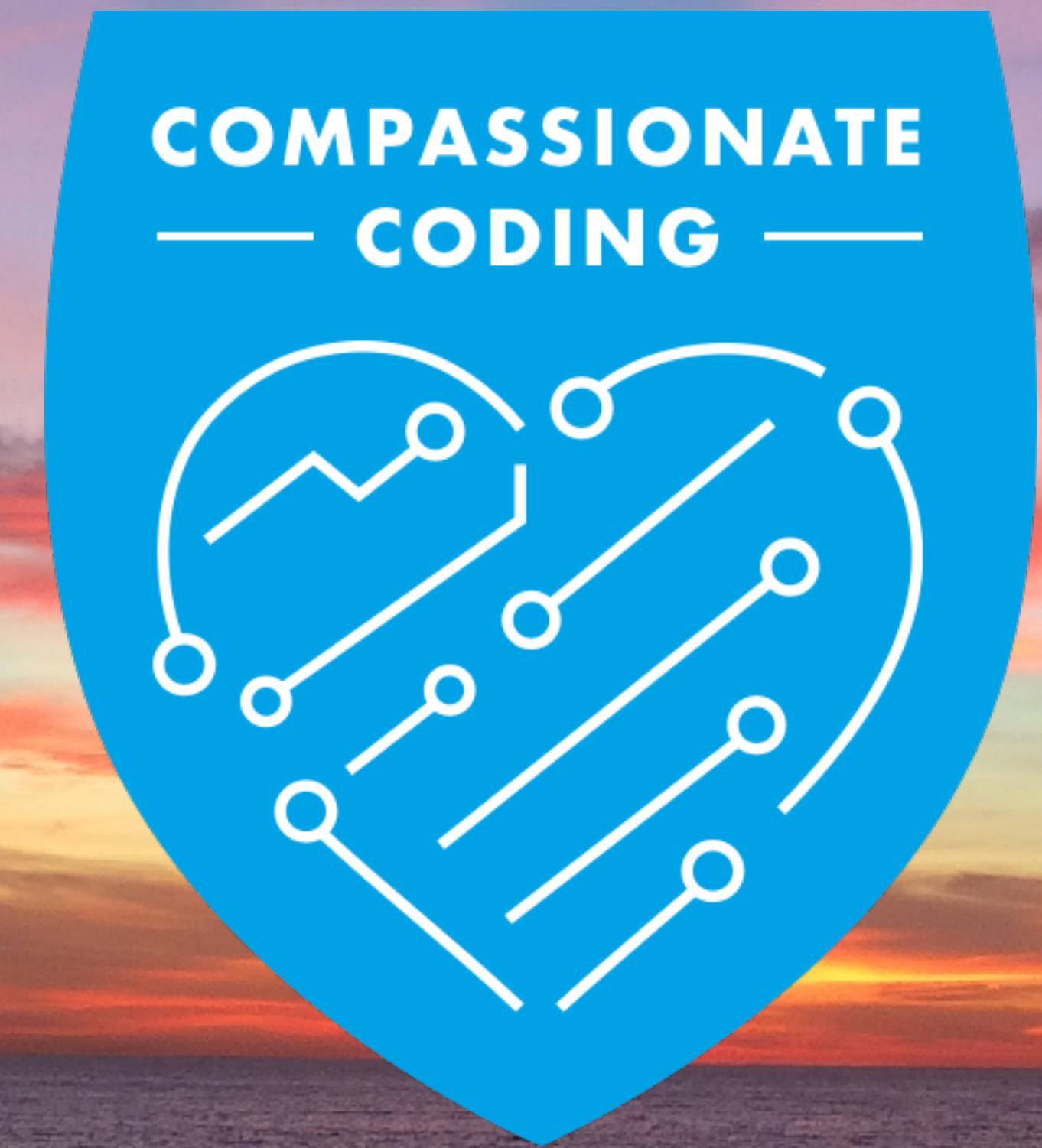


#COMPASSIONATECODING

@APRILWENSEL

# THANK YOU!

✉ NEWSLETTER SIGN-UP: [COMPASSIONATECODING.COM](http://COMPASSIONATECODING.COM)



@COMPASSIONCODE

@APRILWENSEL