

From Barriers To Bridges

*Designing Infrastructure for
Help in Online Programming
Communities*

Denae Ford Robinson
North Carolina State University

<http://denaeford.me>



What does a software
engineer look like?

What does a software engineer look like?



What does a software engineer look like?



<https://movio.co/blog/day-in-the-life-movio-software-engineer/>



<http://wogrammer.org>



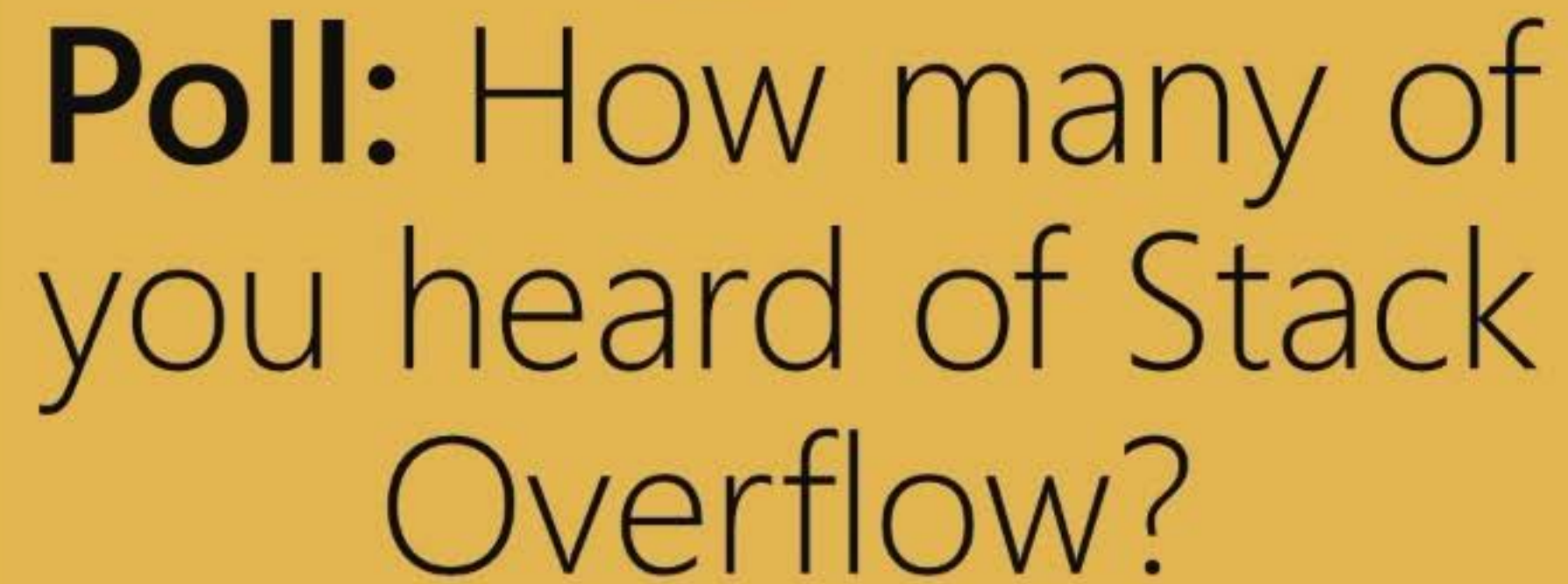
What does a software engineer look like?



<https://movio.co/blog/day-in-the-life-movio-software-engineer/>



<http://wogrammer.org>



Poll: How many of
you heard of Stack
Overflow?



Degree Centralization - Star graph not evaluated as 1

[Ask Question](#)

0



I'm working with a series of undirected small graphs using igraph in R. I'm interested in graph-level degree centralization, and am using the `centr_degree` function from igraph.

However, I noticed that even in cases of "star" graphs (one node connected to all other nodes, with no other connections), the code does not return a degree centralization of 1, though it seems from Freeman 1979 that they should. Am I missing something in how this is supposed to be calculated?

[r](#) [igraph](#) [network-analysis](#)

[share](#) [edit](#)

asked Aug 30 '16 at 20:57



[Abby Jones](#)

1

1 Answer

[active](#)

[oldest](#)

[votes](#)



1



I think the actual problem may be an off-by-one error for the theoretical max. Calculating it manually gives you $3 * 4 = 12$, which agrees with use of `centralize(normalize=FALSE)`, but the R output from `centralization.degree` seems to be $4 * 5 = 20$. To solve your problem I'd suggest using the following code to normalize it yourself.

```
> newCentralization = function(h) centralize(degree(h),normalize=FALSE)/((vcount(h)-1)*(vcount(h)-2))
> newCentralization(h)
[1] 1

> sessionInfo()
  attached base packages:
[1] stats    graphics grDevices utils      datasets methods  base:
[1] igraph_1.0.1
```

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answered Sep 2 '16 at 5:18



[Patricia Jones](#)

26 • 2

asked 12 months ago

viewed 196 times

active 12 months ago

BLOG



[A Tale of Two Industries: How Programming Languages Differ Between Wealthy...](#)

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0

[r and igraph Help, Assortativity Coefficient with Weighted Edges, Remaining weights](#)

Thanks so much Patricia! – [Abby Jones](#) Sep 7 '16 at 17:06

[Burnett et al., 2016]



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*1 of 17m

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- [5](#) [Using geo-coordinates as vertex coordinates in the igraph r-package](#)
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answer

*1 of 26m

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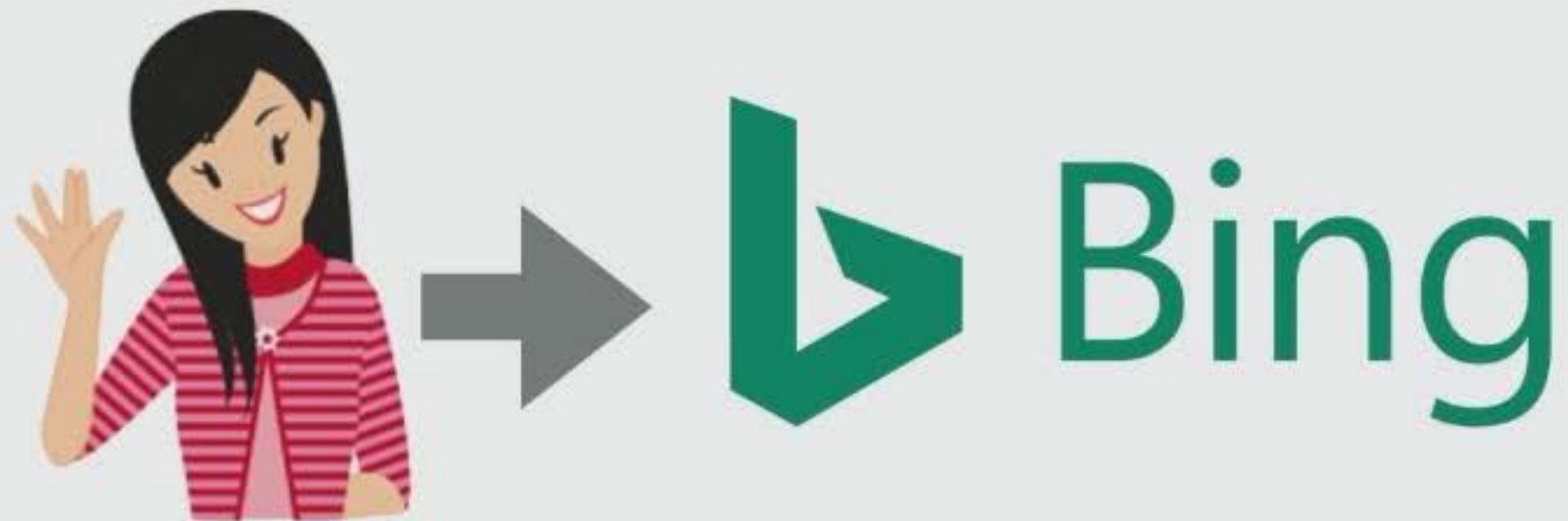
MOTIVATING EXAMPLE



Asha, The Programmer

MOTIVATING EXAMPLE

7



MOTIVATING EXAMPLE

7



MOTIVATING EXAMPLE



1 Answer

active oldest votes



7



I think the only way to import only a single type from a module is to use type alias (as you already noted). To get a qualified access to members of the module (under a different name), you can use module alias:


```
type Item = Item.Item // Type-alias for type(s) from module
module I = Item       // Module-alias for accessing members

// Now you can write:
let getites() : Item = I.empty
```

I don't think there is any way for importing members from module selectively (as in Haskell), so this is probably the best option.

share edit

answered Jul 1 '10 at 10:04


 **Tomas Petrick**
151k ● 172 ● 330



MOTIVATING EXAMPLE

8















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Title

Questions that may already have your answer

- 0 [Why aren't my icons showing?](#)
- 0 [Why aren't my rectangles showing? 1](#)
- 0 [IF... Else + JOption, Why aren't my JOptionPanels showing? 2](#)
- 1 [Why Aren't My Cards Random? 3](#)
- 3 [Why aren't my divs showing up? \[closed\] 2](#)
- 0 [Why aren't my validation messages showing? 1](#)


B *I*            

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I am having a problem with getting this code to work.

```
if (x) {
  print("here is some sample code!")
};
```


Thank you.



WHAT HAPPENED?

9















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B *I*            

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Thank you.



WHAT HAPPENED?



1. did not see other users who look like her post questions



<p>edited Jan 3 at 17:17</p>  <p>Md. Abu Nafee Ibna Zahid</p> <p>189 ● 2 ● 11</p>	<p>asked Jan 3 '09 at 20:39</p>  <p>Alex Spurling</p> <p>17.5k ● 18 ● 46 ● 58</p>
--	---

WHAT HAPPENED?



1. did not see other users who look like her post questions
2. unfamiliar with community expectations and feels her question is unfit

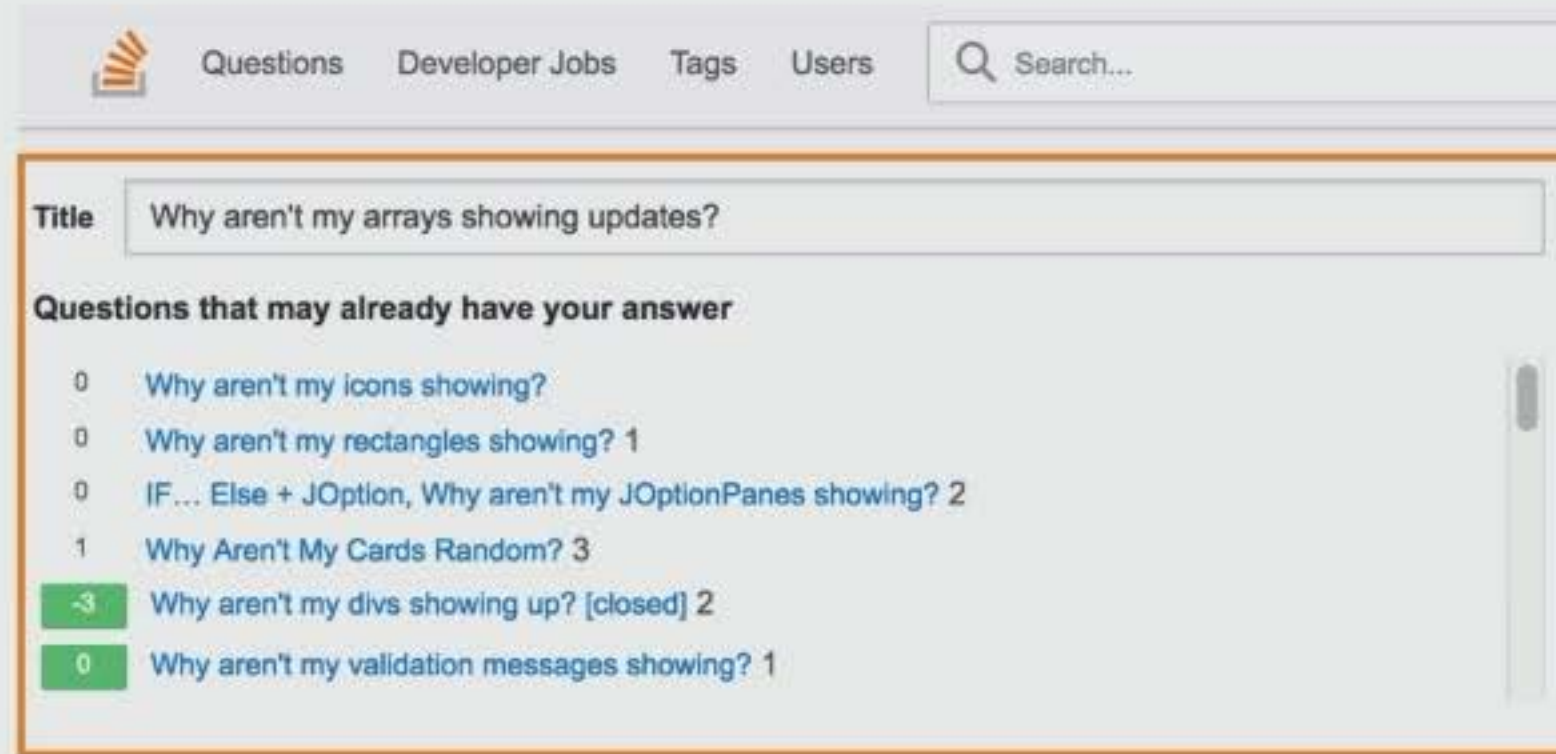


protected by [Aniket Thakur](#) Oct 2 '15 at 18:54

This question is protected to prevent "thanks!", "me too!", or spam answers by new users. To answer it, you must have earned at least 10 [reputation](#) on this site (the [association bonus](#) does not count).

WHAT HAPPENED?

9



Questions Developer Jobs Tags Users Search...

Title Why aren't my arrays showing updates?

Questions that may already have your answer

- 0 Why aren't my icons showing?
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3. question may be a duplicate since list of existing questions appear

WHAT HAPPENED?



1. did not see other users who look like her post questions
2. unfamiliar with community expectations and feels her question is unfit
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WHILE 50 MILLION PEOPLE VISIT STACK OVERFLOW MONTHLY



[Stack Overflow 2018 Developer Survey]

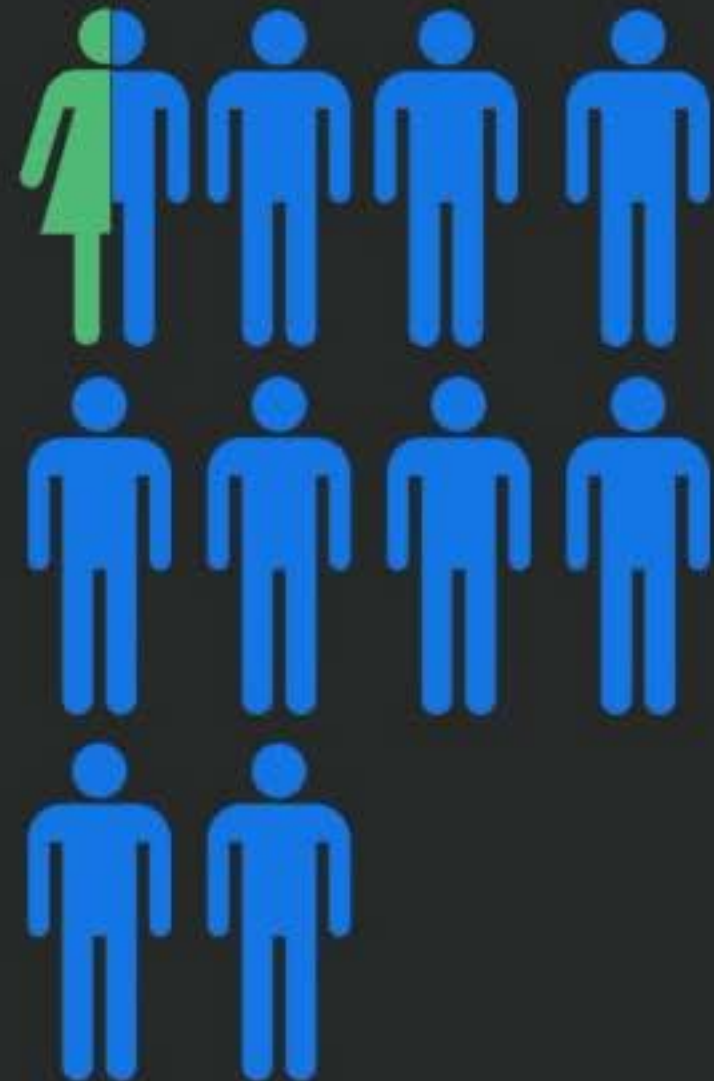
WHILE 50 MILLION PEOPLE VISIT STACK OVERFLOW MONTHLY
ONLY **10 MILLION** HAVE ACCOUNTS



[Stack Overflow 2018 Developer Survey]

LESS THAN 7% WOMEN IN OPEN SOURCE

Open Source Communities



7% vs. 20%

Software Engineers



[David 2008] [Zlotnick 2017]
[SO Developer Survey 2018]

[USBLS 2016]

1/3 OF USERS HAVE ≤ 5 YEARS EXPERIENCE¹²

Many users are new

Years Since Learning to Code

All Respondents

Professional Developers



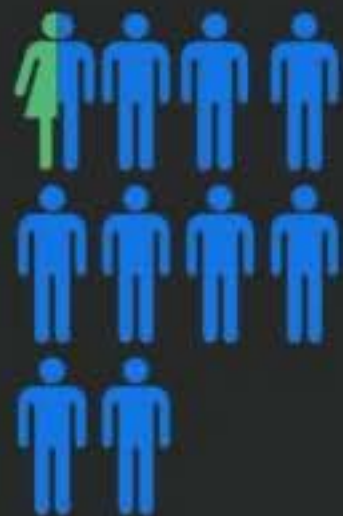
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7% vs. 20%

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WHILE 50 MILLION PEOPLE VISIT STACK OVERFLOW MONTHLY
ONLY 10 MILLION HAVE ACCOUNTS

How Much Do You Cost?
Yegor Bugayenko
<https://bit.ly/2tkr02o>



\$50+ /hour:
owns popular OSS products
Stack Overflow score > 5K

\$100+ /hour:
owns popular OSS products
Stack Overflow score > 20K

LESS THAN 7% WOMEN IN OPEN SOURCE

1/3 OF USERS HAVE <=5 YEARS EXPERIENCE

Open Source Communities



7% vs. 20%

Software Engineers



Many users are new



PROBLEM

Programmers, *especially underrepresented groups and novices*, encounter challenges when interested in participating in online programming communities.



Atlassian
Bitbucket



GitLab



GitHub

[Vasilescu 2013, Steinmacher 2015, Filippova 2015, Stack Overflow 2017]

SO Mentorship [CHI 18]
SO Compiler Errors [FSE 18]
SO Barriers [FSE 16]
Frustrated Devs [CHASE 15]

GH Signals [ICSE SEIS 19]
Peer Parity [VLHCC 17]

Characterizing Devs [ESEM 17]
Tool Notifications [FSE 16]

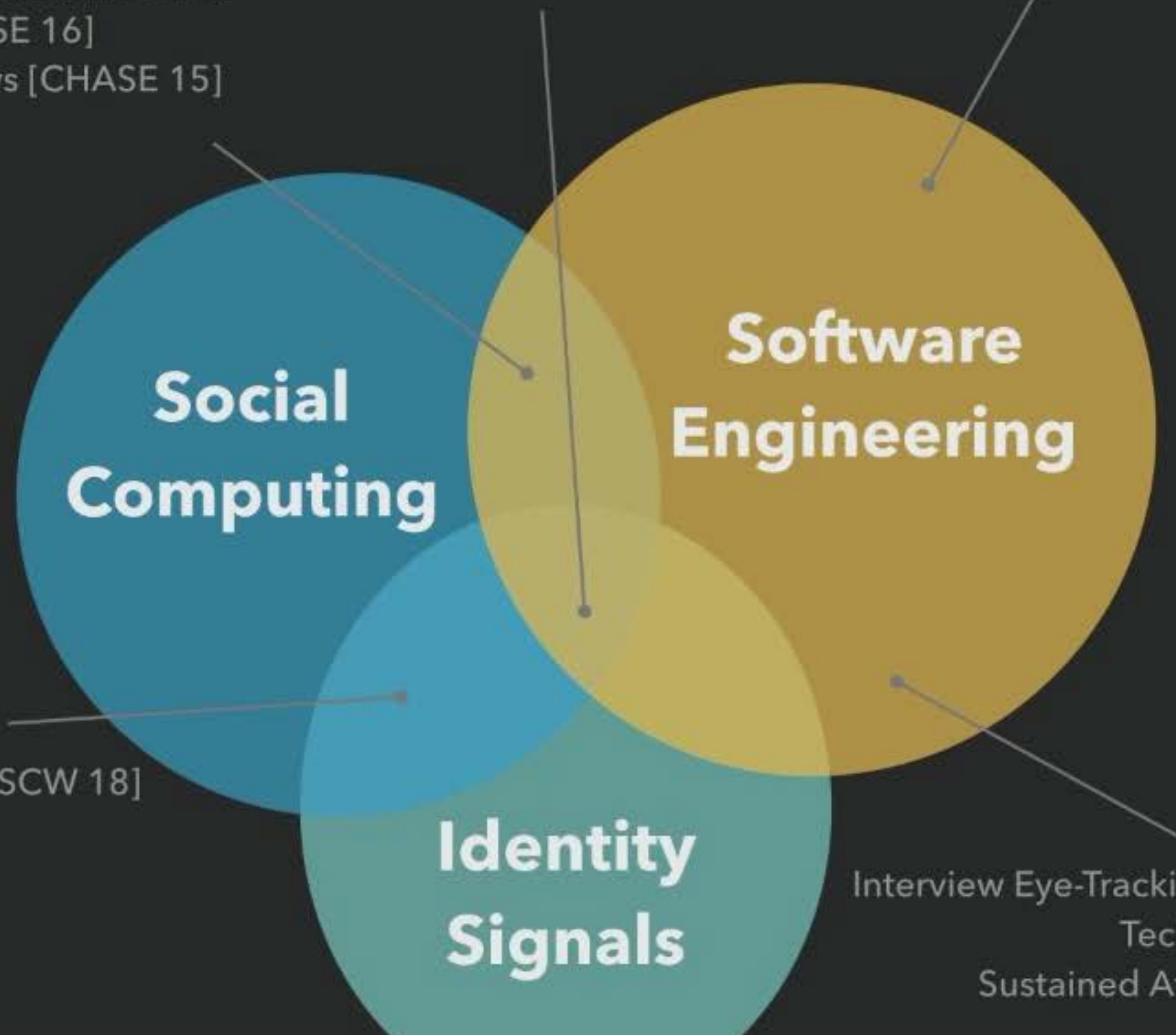
Social Computing

Software Engineering

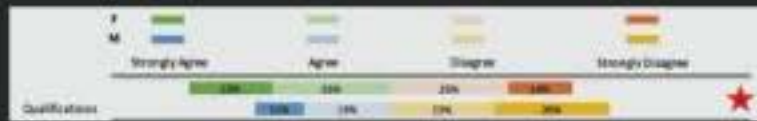
Identity Movements [CSCW 18]

Identity Signals

Interview Eye-Tracking [ICSE NIER 18]
Tech Talk [CHASE 17]
Sustained Attention [EMIP 15]



TODAY



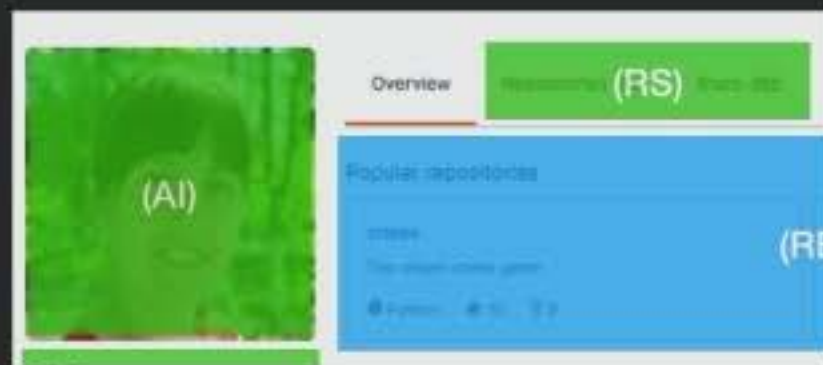
Barriers to Participation

[Ford, Smith, Guo, Parnin. FSE 2016]



Mentorship

[Ford, Lustig, Banks, Parnin. CHI 2018]



Vision

The Future of Asking

RQ1

What barriers do women face on Stack Overflow?

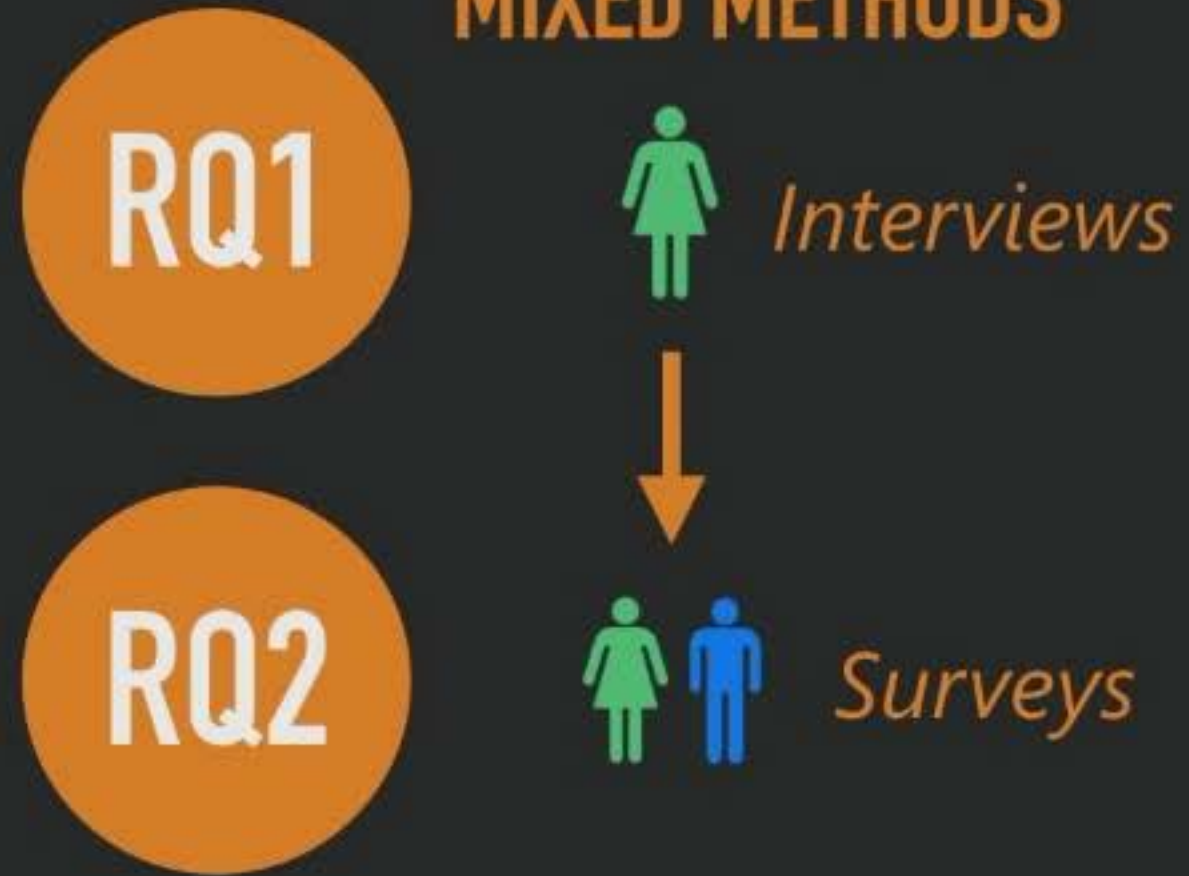
RQ2

How do barriers vary by gender?

RQ3

How do barriers manifest across usage and experience?

MIXED METHODS



SEMI-STRUCTURED INTERVIEWS



Emailed 'Women in Computer Science' Lists

22 Responses

SEMI-STRUCTURED INTERVIEWS



Emailed 'Women in Computer Science' Lists

22 Responses

1 of 22 in "SO Top 100 of All Time"*

Demographics



Students



Professionals



Lurkers



Active Users

*<http://stackexchange.com/leagues/1/alltime/stackoverflow>

SEMI-STRUCTURED INTERVIEWS



Emailed 'Women in Computer Science' Lists

22 Responses

1 of 22 in "SO Top 100 of All Time"*

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Interview Topics

Personal usage of the site

How people communicate on the site

Personal incentives to using the site

Response to potential scenarios on the site

*<http://stackexchange.com/leagues/1/alltime/stackoverflow>

INTERVIEW ANALYSIS



Barrier Statement Examples

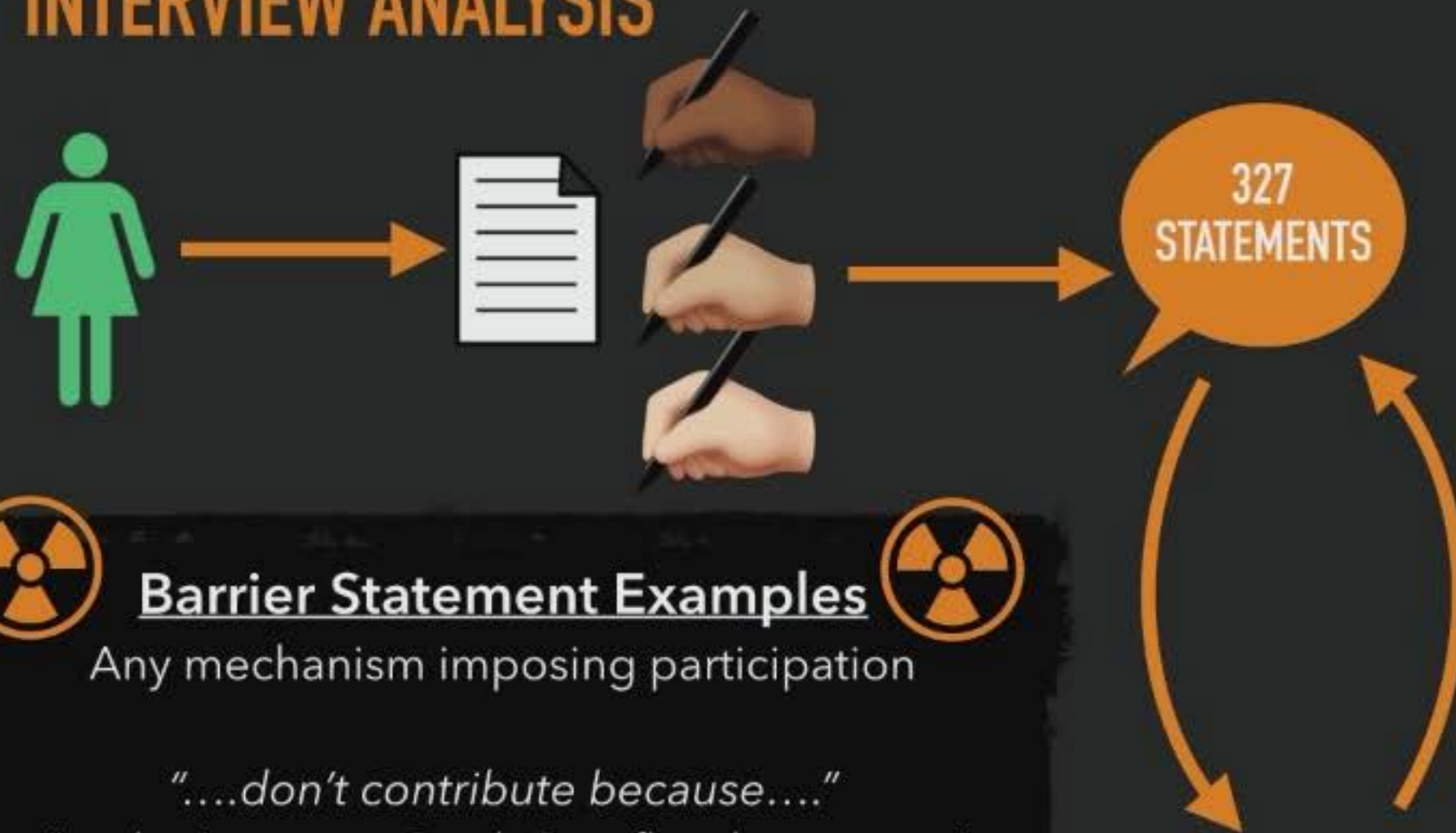


Any mechanism imposing participation

"....don't contribute because...."

"... don't post on Stack Overflow because..."

INTERVIEW ANALYSIS



Barrier Statement Examples

Any mechanism imposing participation

"...don't contribute because..."

"... don't post on Stack Overflow because..."

P: I'm only looking for stuff that I really don't understand myself. I don't feel like my expertise ... for me to actually post an answer that would be of any help to anyone

else.3:07

Justin

#B.8 Doesn't feel like an expert or qualified to help others.

Denae

#B.8 Doesn't feel like her expertise is high enough to help others.

INTERVIEW ANALYSIS



Barrier Statement Examples
Any mechanism imposing participation

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- Justin**
#B.8 Doesn't feel like an expert or qualified to help others.
- Denae**
#B.8 Doesn't feel like her expertise is high enough to help others.

QUALIFICATIONS

“I don't feel like my expertise [is enough] for me to actually post an answer that would be of any help to anyone else.”



QUALIFICATIONS

“I don't feel like my expertise [enough] for me to actually post a paper that would be of any help to anyone else.”

IMPOSTER SYNDROME



ONBOARDING HOOPS

“I feel like *everyone else already knows what it is*. And [I] want to stay away from that extra work to figure out how to use it. *Just figuring out what the etiquette is, all the little social things too that are kind of unspoken*”



ONBOARDING HOOPS

“I feel like **everyone else already knows what it is**. And [I] want to save myself from that extra work to figure out how to use it. **Just figuring out the etiquette is, all the little things too that are kind of**...”

UNFAMILIAR NORMS



FEAR OF NEGATIVE FEEDBACK

“It’s hard enough to ask for help, then to ask for help and get rude help. You are kind of like, ‘never mind’.”



FEAR OF NEGATIVE FEEDBACK

“It’s hard enough to ask for help when to ask for help and get rudeness. You are kind of like, ‘never’”

CONFLICT AVOIDANCE



RQ1

What barriers do women face on Stack Overflow?

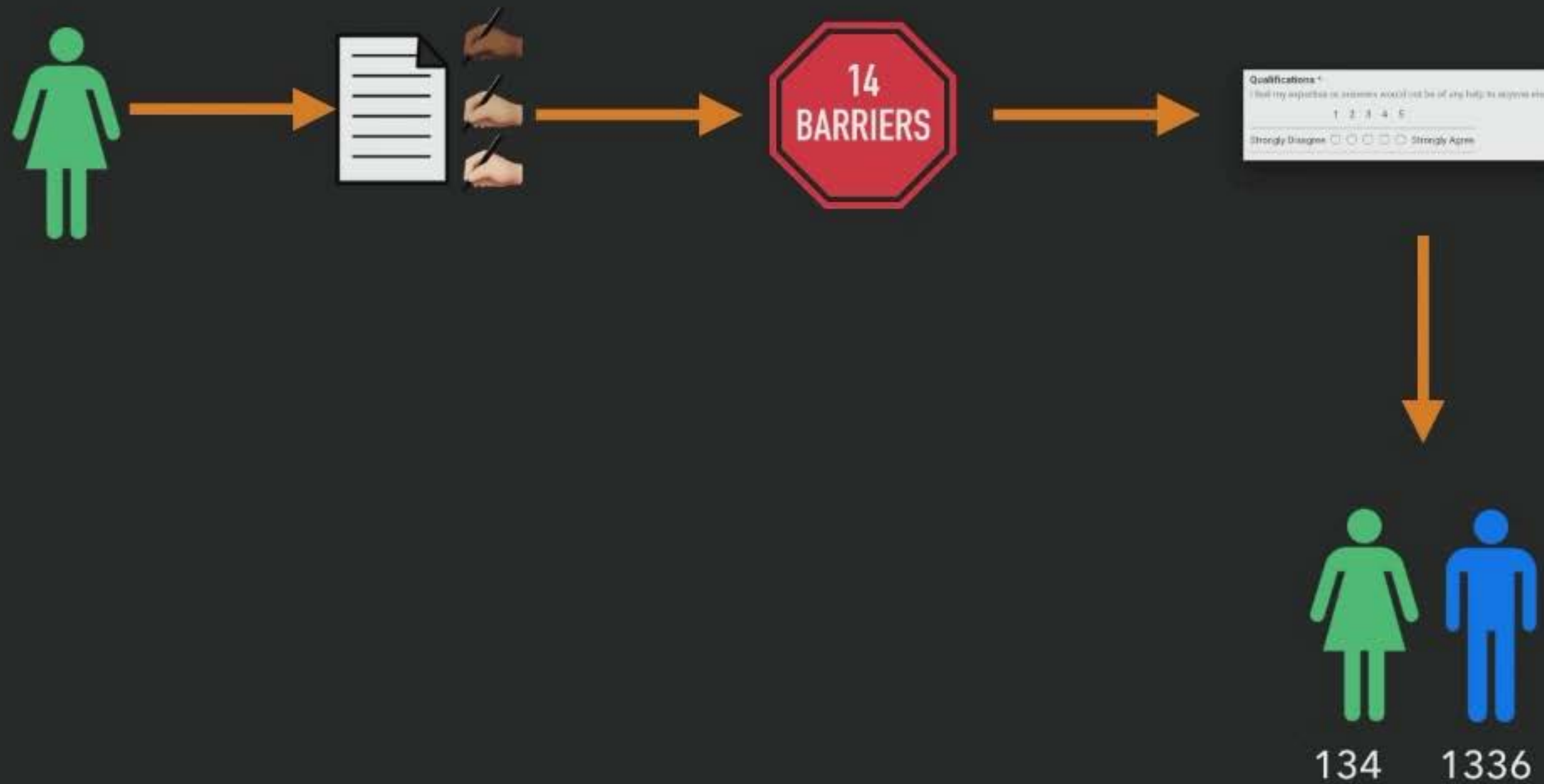
RQ2

How do barriers vary by gender?

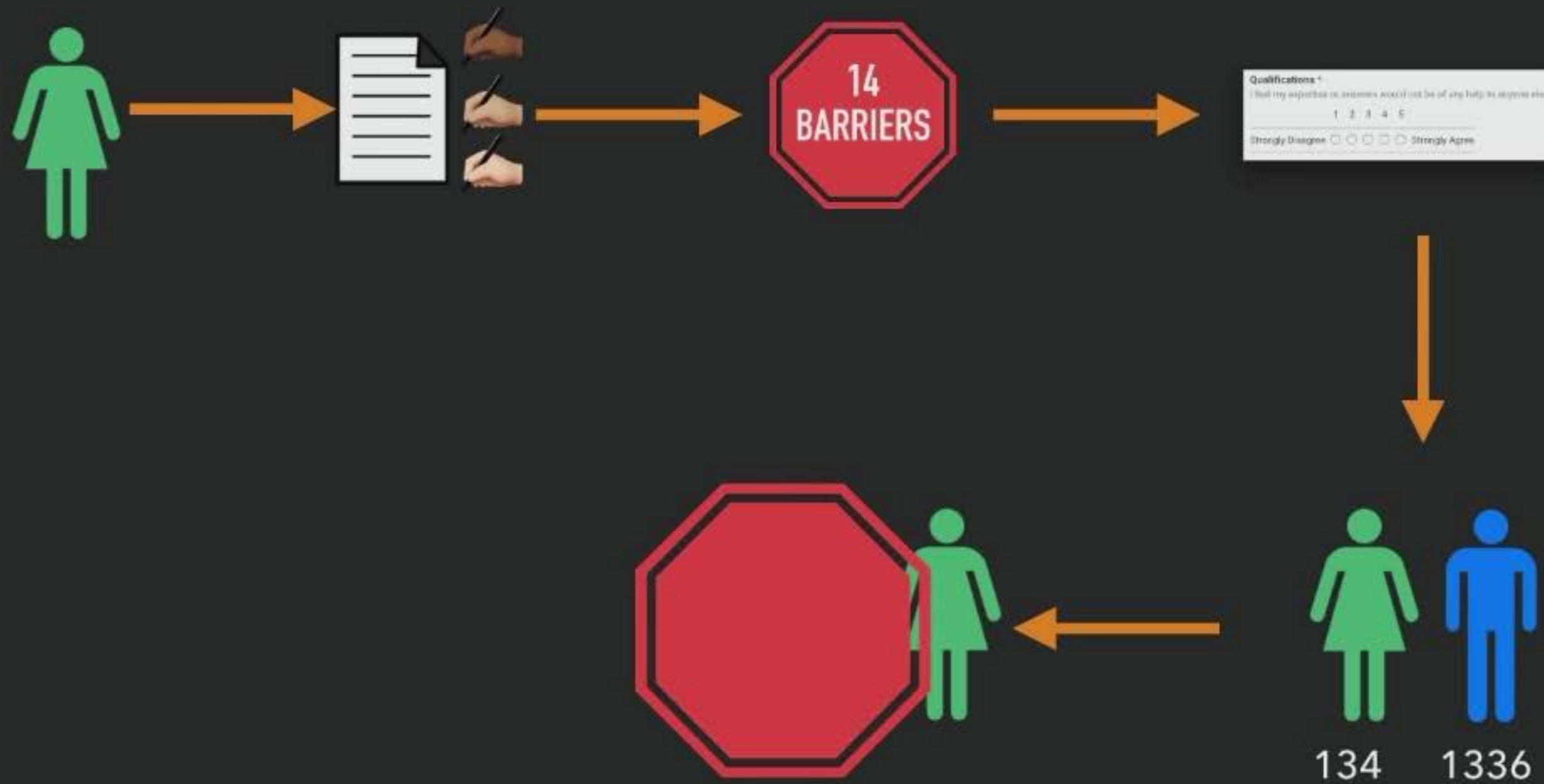
EXPERIMENT



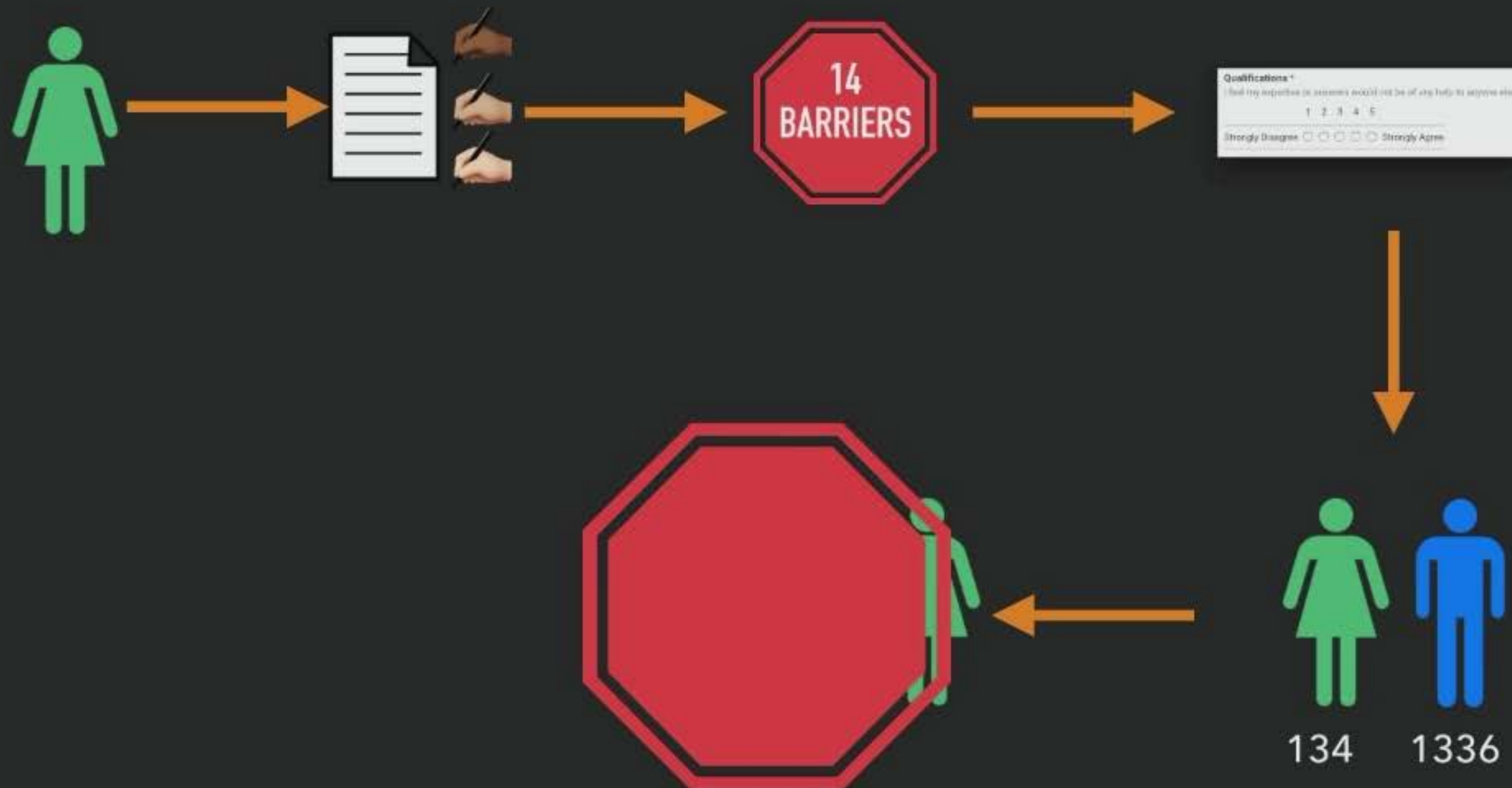
EXPERIMENT



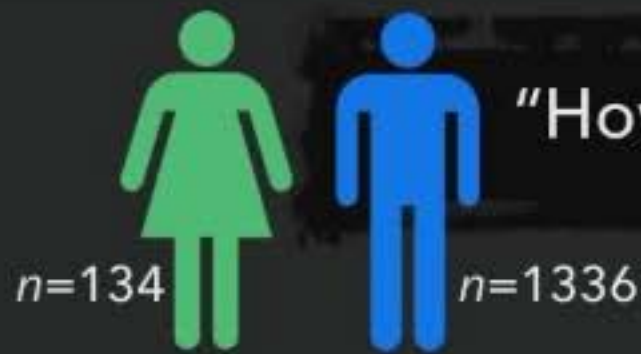
EXPERIMENT



EXPERIMENT



RESULTS



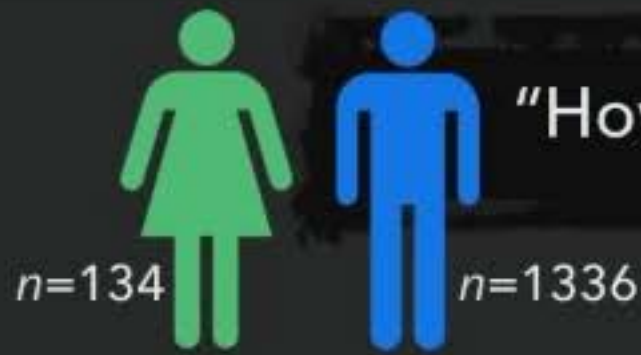
“How often is this a barrier for you?”

WILCOXON RANK SUM TEST

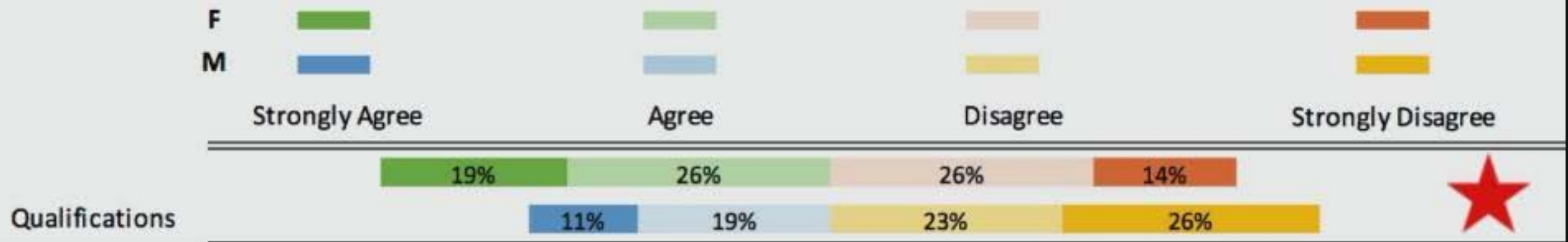
$\alpha = .05$; $\alpha = 0.0012$ with Bonferroni Correction

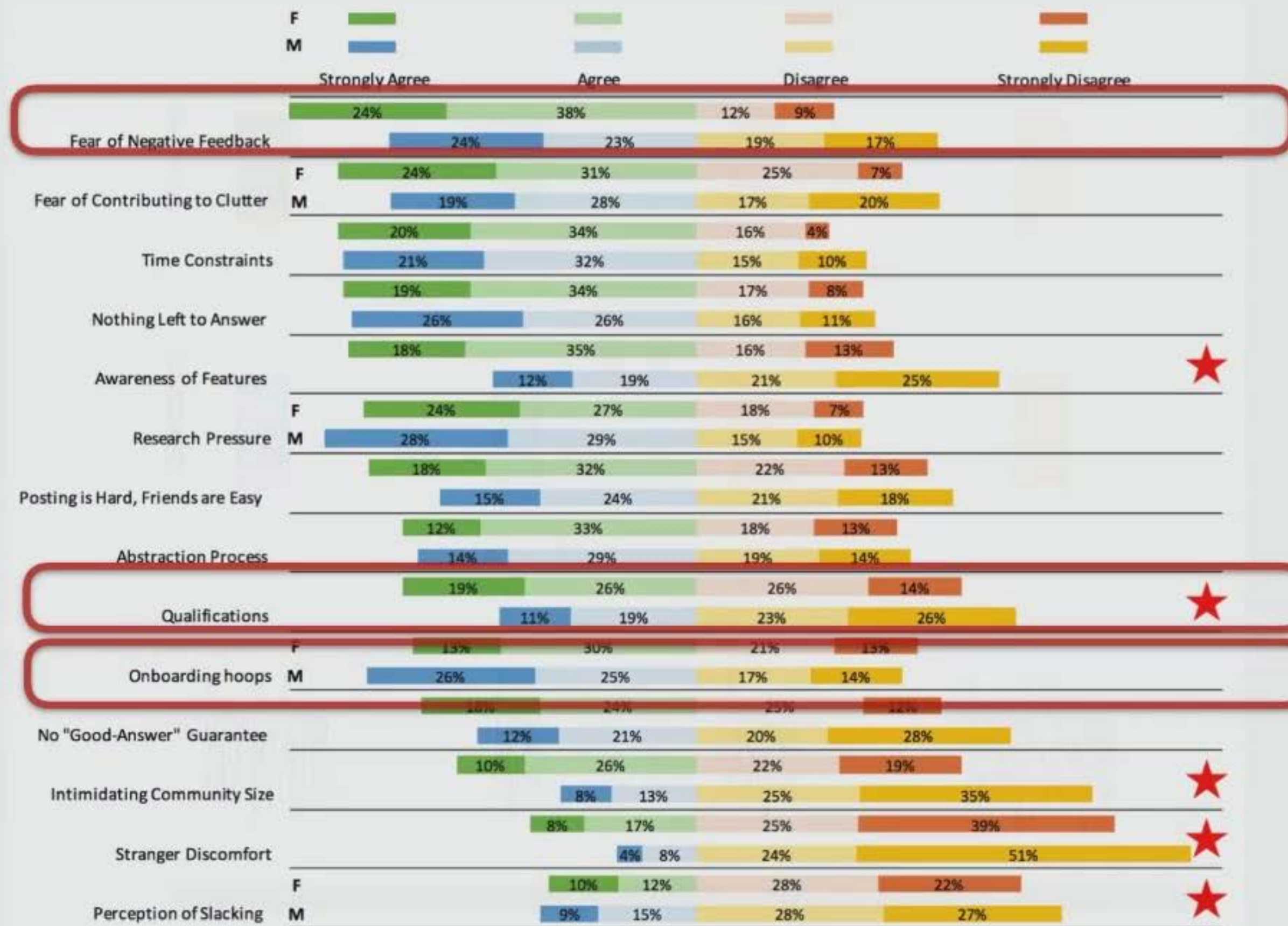
Barrier	p-value	SigDiff	Effect Size	Women Likert	Men Likert
Intimidating Community Size	<0.001	★	0.5		
Awareness of Features	<0.001	★	0.5		
Stranger Discomfort	<0.001	★	0.4		
Qualifications	<0.001	★	0.4		
Perception Of Slacking	0.001	★	0.4		
Fear of Negative Feedback	0.003		0.4		

RESULTS



“How often is this a barrier for you?”





BARRIERS BY FACTORS

Wilcoxon Rank Sum Test

$\alpha = .05$; $\alpha = 0.0012$ with Bonferroni Correction

ACCOUNT ACTIVITY

HAS ACCOUNTS VS. NOT

(n = 1003, n = 467)

Awareness of Features

Stranger Discomfort

Intimidating Community Size

Fear of Contributing to the Clutter

Posting is Hard, Friends are Easy

Qualifications

Onboarding Hoops

EXPERIENCE

FULL TIME DEV VS. NOT

(n = 1003, n = 467)

Qualifications


Time Constraints

- **Language Divide:** There are two types of language that
- contribute to the unwelcoming atmosphere on Stack
- Overflow: complex questions and idle “boy's club” chatter

- **Helpful Intentions:** Participants want to contribute, but
- do not feel like they can based on difficulty finding
- opportunities to post

IMPACT OF IDENTIFYING BARRIERS







30




Jeff Atwood 
@codinghorror Following

I am a big fan of this new feature Stack Overflow added. A research study via @Denaeford in mid-2016 highlighted the need, and I forwarded multiple rounds of direct email feedback at that time. Glad to see it finally getting worked on.

Your Answer

B *I*           

 **Petruza** is a new contributor. Be nice, and check out our [Code of Conduct](#).

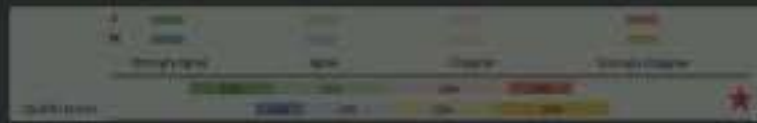
Stack Overflow founder acknowledges novice implications of the work

Barriers also resonate with SO users on blog.denaeford.me



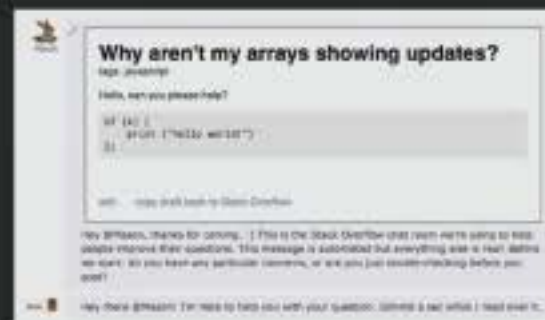
Really interesting. As a female, minimally-active, but long-time/frequent reader of SO I definitely went through a ran emotions from of early, naive use, intimidation, empathy, regret, etc. I a period of pretty active answering on another SE board gave me a much better understanding of the source of some frustration (and seeming hostility) for SO power users. The Help Vampire is real, and I can see how it'd be easy to become impatient with that. I really like the question suggestion feature, and when editors take the time to comment with the asker in mind, I think it can make a big difference.

TODAY



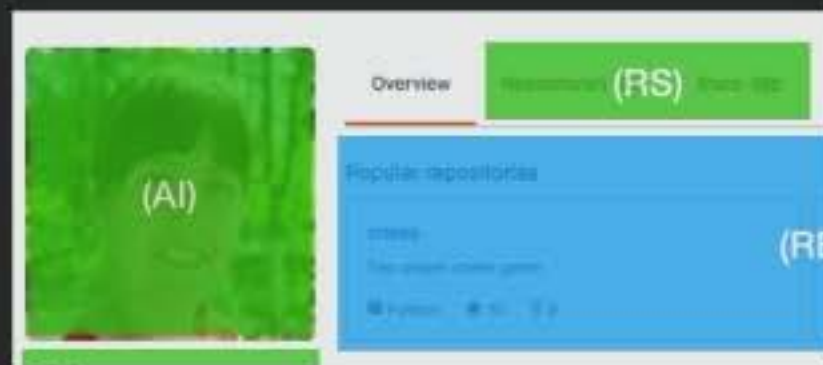
Barriers to Participation

[Ford, Smith, Guo, Parnin. FSE 2016]



Mentorship

[Ford, Lustig, Banks, Parnin. CHI 2018]



Vision

The Future of Asking

Questions are ill-received

- 0 Why aren't my icons showing?
- 0 Why aren't my rectangles showing? 1
- 0 IF... Else + JOption, Why aren't my JOptionPanes showing? 2
- 1 Why Aren't My Cards Random? 3
- 3 Why aren't my divs showing up? [closed] 2
- 0 Why aren't my validation messages showing? 1

Questions do not follow community etiquette



2 hrs · Seattle, WA · 🌐

More often than not, my posts get downvoted because I didn't follow some arcane etiquette. This hostility to outsiders and new contributors is exactly why I've never bothered editing Wikipedia.

Interested in contributing but don't know how

"Is there some trick to making it worthwhile to post on Stack Overflow?"



RQ

How can users encourage novices to ask well-received questions?



as a

Community of Practice





as a

Community of Practice

where *groups of people bound together by shared expertise and passion for a joint goal*

[Lave 1991]





as a
Community of Practice

where *groups of people bound together by shared expertise and passion for a joint goal*
[Lave 1991]

Learning through mutual engagement.

Mutual engagement exposes newcomers to expert practices [Wenger 1998]



EXPLORATORY STUDY

35

The image shows a screenshot of a Slack channel conversation. On the left, a sidebar lists channels: # donotuse, # pilot1, # pilot2 (highlighted), and # researchteam. Below the channels are direct messages to slackbot, dford (you), ajax, apollo, ares, and castor. Two orange callout boxes are overlaid on the sidebar: 'novice' points to the # pilot2 channel, and 'mentor' points to the # pilot1 channel. The main chat area shows a message from 'ajax' at 12:57 PM asking for help with Python 2.7 vs 3. A reply from 'apollo' at 7:09 PM explains the tagging issue and includes a screenshot of a search result for 'python3 on RHEL'. A second message from 'ajax' at 7:11 PM thanks 'apollo'.

novice

mentor

ajax 12:57 PM
I've been working out of Python 2.7 and I found it difficult to determine which posts are for python 3 and which are for older versions. Do you know if there's a way to easily check this?

apollo 7:09 PM
[@ajax](#) Unfortunately, there isn't as far as I know. Most people just tag it as python, not the version. Sometimes I will edit the post to add Python 3 sample code if it isn't already there.
For example:
Pasted image at 2017-03-29, 7:10 PM ▾

Q: Problems installing python3 on RHEL
I'm trying to install **python3** on RHEL using the following steps...
matches found for: **python3** Followed by: yum search python
What should I try next? ...

python python-3.x rhel

The tag python-3.x. But it's pretty inconsistent as to whether people use that tag

ajax 7:11 PM
Ohh so there is a tag they can use, they just don't typically use it. okay, well thanks!

EXPLORATORY STUDY

35

The screenshot shows a Slack interface with a sidebar on the left and a main chat area on the right. The sidebar includes sections for 'Jump to...', 'All Threads', 'Channels' (with #donotuse, pilot1, pilot2, and researchteam), and 'Direct Messages' (with slackbot, dford (you), ajax, apollo, ares, and castor). Two orange callout boxes are overlaid on the sidebar: 'novice' points to the 'Jump to...' section, and 'mentor' points to the 'Channels' section. The main chat area shows a conversation between 'ajax' and 'apollo'. 'ajax' asks a question about Python 2.7 vs 3. 'apollo' responds with advice and a screenshot of a search result for 'python3 on RHEL'. 'ajax' then thanks 'apollo'.

novice

mentor

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Context switching
between platform

EXPLORATORY STUDY

35

The screenshot shows a Slack interface with a sidebar on the left and a main chat area on the right. The sidebar includes a 'Jump to...' search bar, 'All Threads', 'Channels' (with #donotuse, pilot1, pilot2, and researchteam), and 'Direct Messages' (with slackbot, dford (you), ajax, apollo, ares, and castor). Two orange callout boxes are overlaid on the sidebar: 'novice' points to the 'ajax' user, and 'mentor' points to the 'apollo' user. The main chat area shows a conversation where 'ajax' asks a question about Python 2.7 vs 3, 'apollo' responds with advice and a search result image, and 'ajax' replies with a thank you. The search result image is titled 'Q: Problems installing python3 on RHEL' and contains text about installing python3 on RHEL using yum search. The search results shown are 'python', 'python-3.x', and 'rhel'. The 'python-3.x' tag is highlighted with an orange box.

novice

mentor

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Context switching
between platform

Asynchronous
communication

EXPLORATORY STUDY

35

The screenshot shows a Slack interface with a sidebar on the left and a main chat area on the right. The sidebar includes a search bar, a list of channels (donotuse, pilot1, pilot2, researchteam), and a list of direct messages (slackbot, dford, ajax, apollo, ares, castor). The main chat area shows a conversation between two users: 'ajax' and 'apollo'. 'ajax' asks a question about Python 2.7 vs 3. 'apollo' responds with a link to a Stack Overflow question and explains the tagging convention. 'ajax' then thanks 'apollo'.

novice

mentor

ajax 12:57 PM
I've been working out of Python 2.7 and I found it difficult to determine which posts are for python 3 and which are for older versions. Do you know if there's a way to easily check this?

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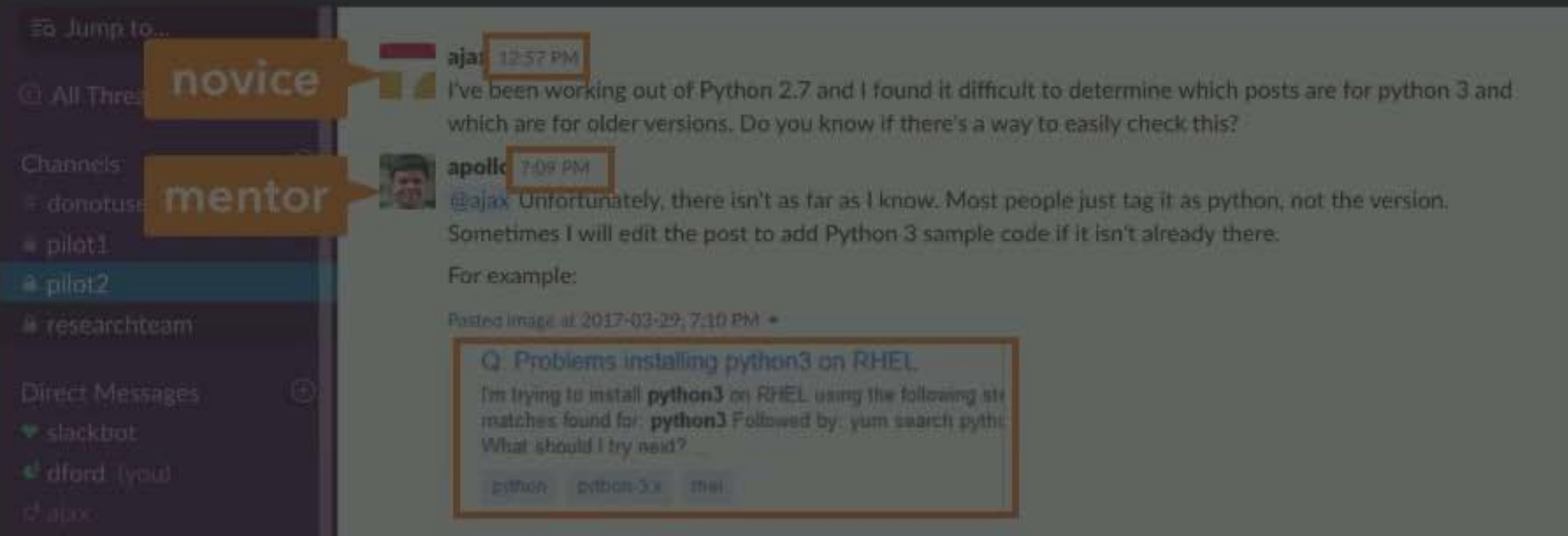
Context switching
between platform

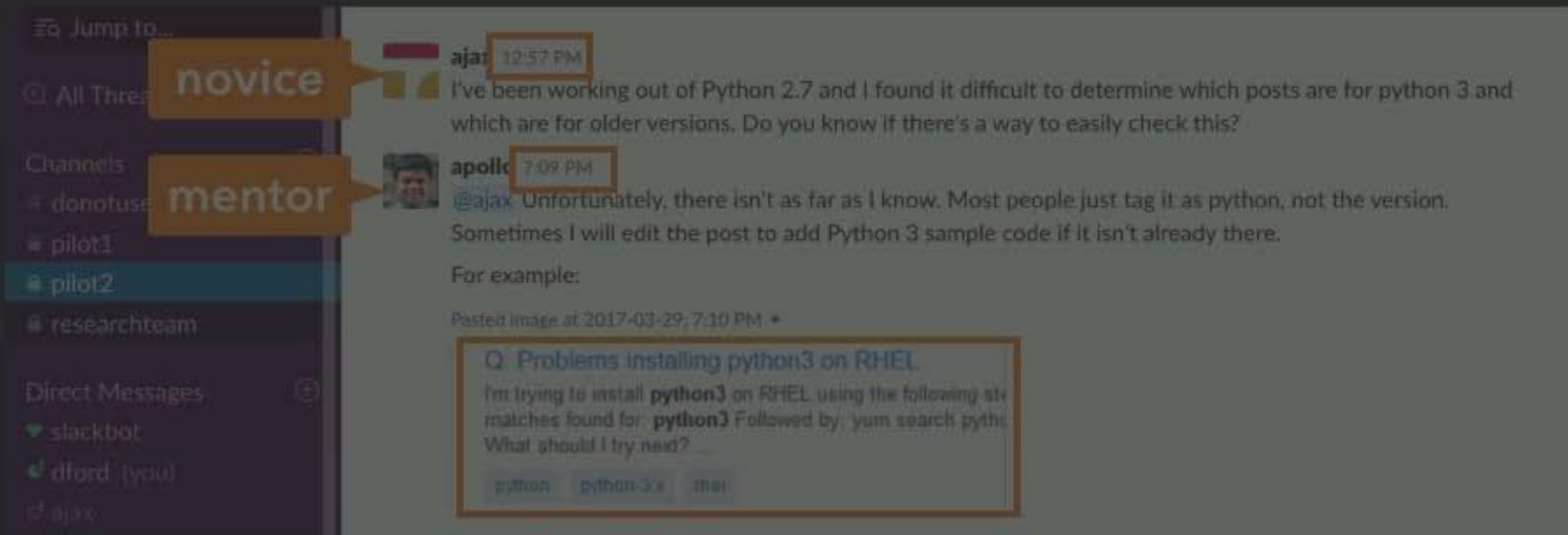
Asynchronous
communication

Dialogue did not
refine questions

DESIGN PRINCIPLES

36





[Epstein et al., 2002]

[Kraut et al., 2012]

Allow mistakes in private space

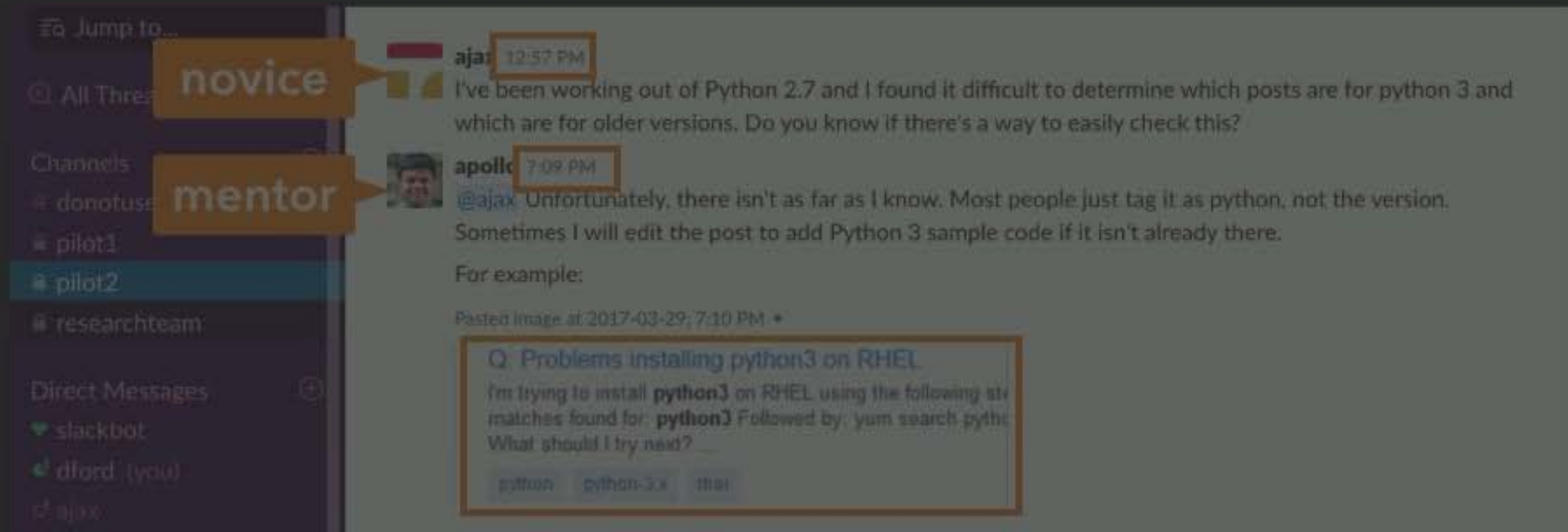


Asynchronous communication



Dialog and not refinements





[Epstein et al., 2002]
[Kraut et al., 2012]

Allow mistakes in private space



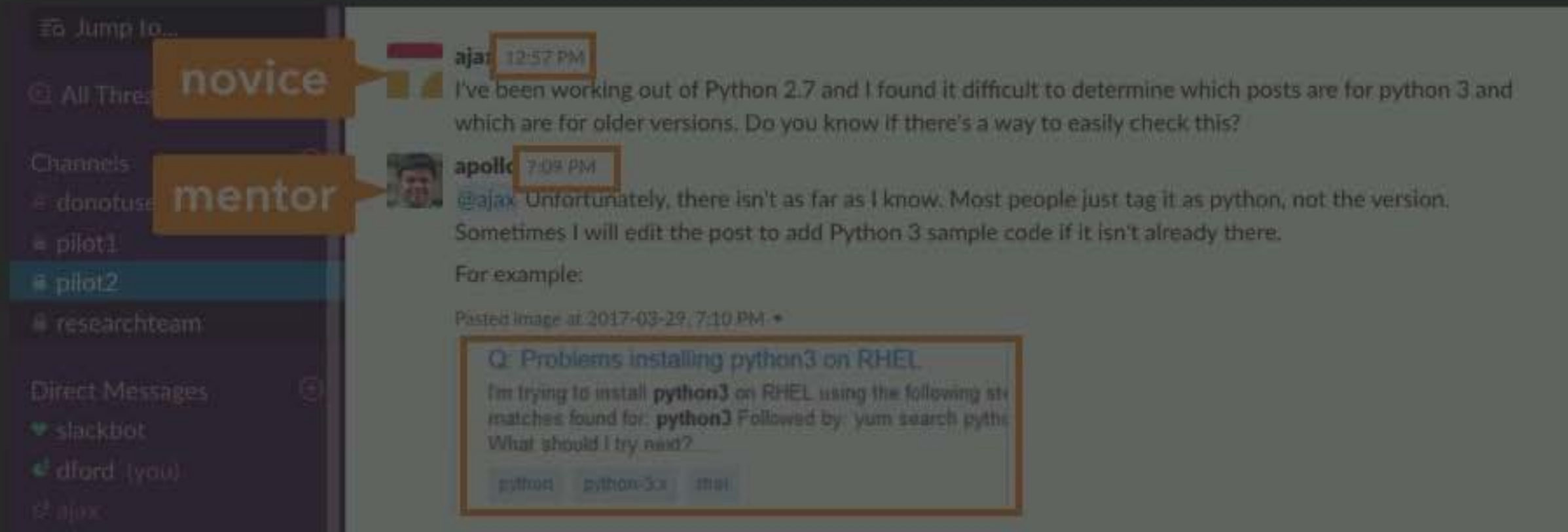
[Baron 1993] [Ford et al., 2016]
[Kraut et al., 2012]

Provide formative and timely feedback



Dialog should not refine questions





[Epstein et al., 2002]
[Kraut et al., 2012]

Allow mistakes in private space



[Baron 1993] [Ford et al., 2016]
[Kraut et al., 2012]

Provide formative and timely feedback



[Wenger, 1998]
[Kraut et al., 2012]

Do not answer questions, help others ask better questions



COLLABORATIVE EDITING

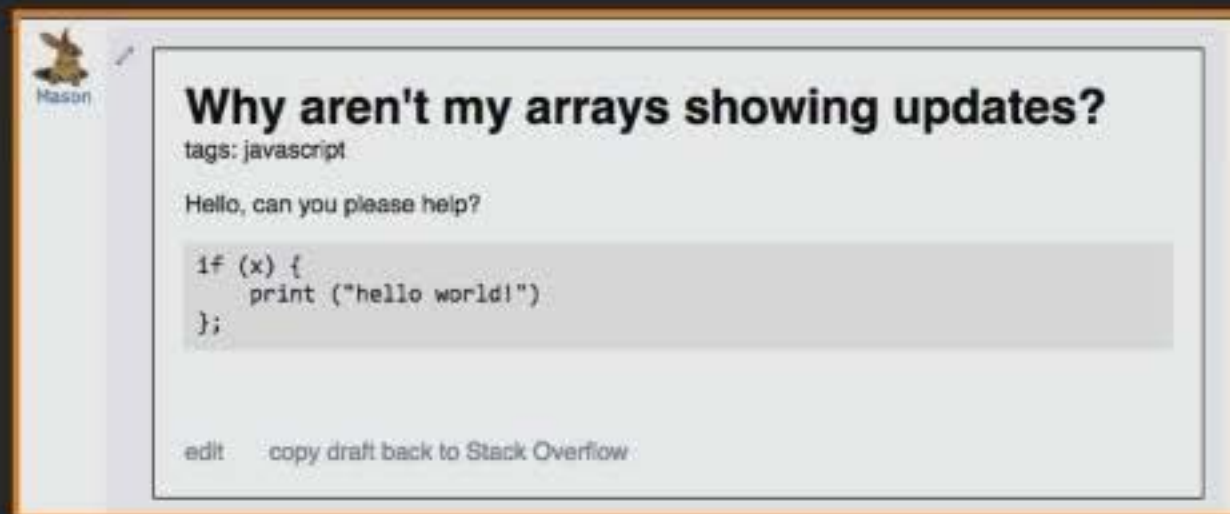
Two core components:



COLLABORATIVE EDITING

Two core components:

- 1 Collaborative question draft



stack overflow

COLLABORATIVE EDITING

Two core components:

1 Collaborative question draft

2 *Help Room* to discuss and edit the draft

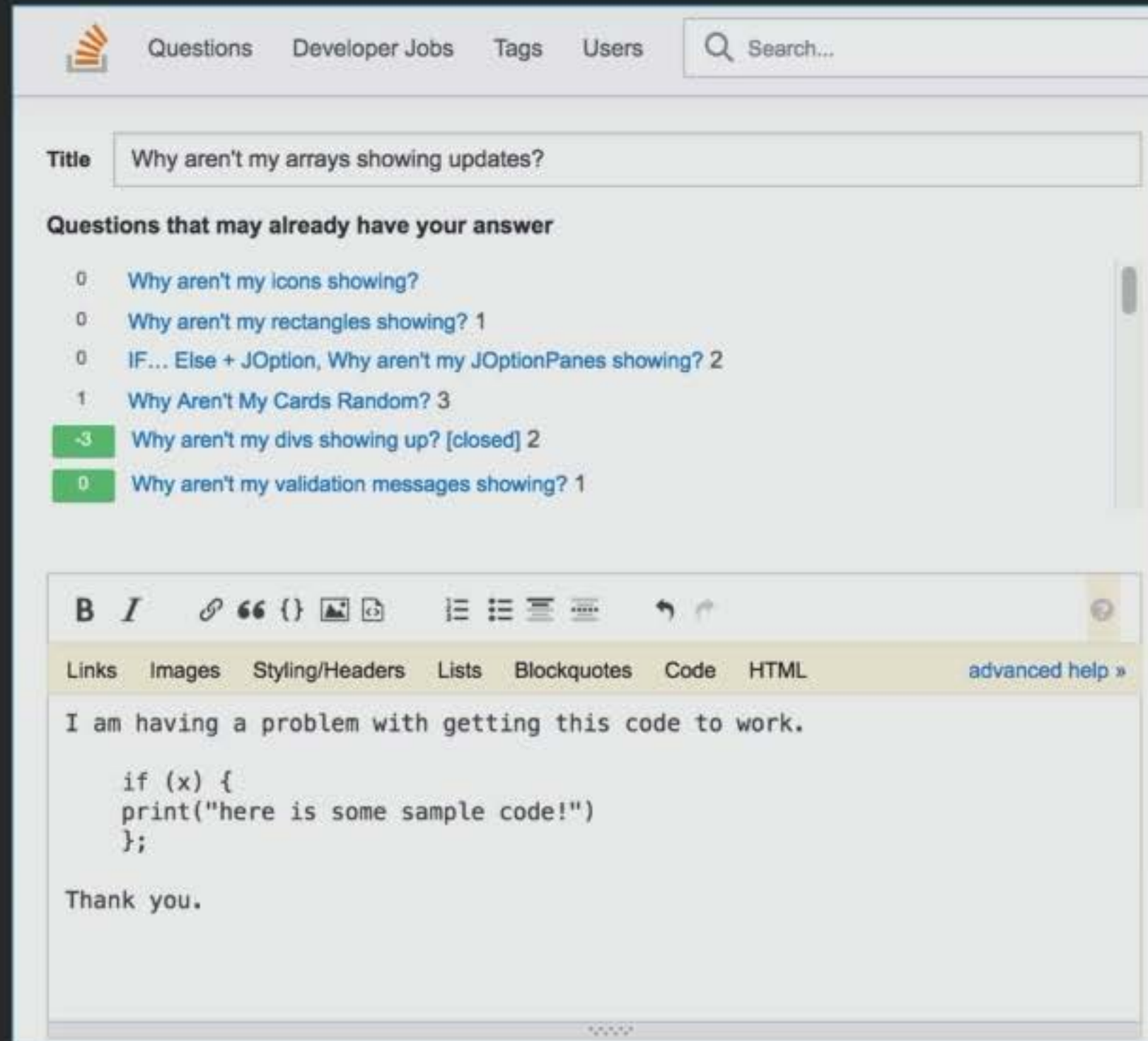


stack overflow

Just-In-Time Mentorship Study

- ✓ To observe and measure changes in **question quality**
- ✓ To understand **feedback** provided by mentors
- ✓ To improve **experience** for new question askers
- ✓ To learn how to **scale these benefits** to the whole community

Novice writes
question



The screenshot shows a Stack Overflow question page. At the top, there is a navigation bar with links for "Questions", "Developer Jobs", "Tags", and "Users", along with a search bar. The main content area features a "Title" field containing the question: "Why aren't my arrays showing updates?". Below the title, there is a section titled "Questions that may already have your answer" which lists several related questions with their respective scores and counts. The question "Why aren't my validation messages showing?" is highlighted with a green background and a score of 0. Below the list of questions, there is a rich text editor with a toolbar containing icons for bold, italic, link, quote, code, image, and other formatting options. The editor contains the following text: "I am having a problem with getting this code to work." followed by a code block:

```
if (x) {  
  print("here is some sample code!")  
};
```

 and ends with "Thank you."

Questions

Developer Jobs

Tags

Users

Search...

Title

Why aren't my arrays showing updates?

Questions that may already have your answer

- 0 Why aren't my icons showing?
- 0 Why aren't my rectangles showing? 1
- 0 IF... Else + JOption, Why aren't my JOptionPanes showing? 2
- 1 Why Aren't My Cards Random? 3
- 3 Why aren't my divs showing up? [closed] 2
- 0 Why aren't my validation messages showing? 1

B *I* [Link](#) [Quote](#) [Code](#) [Image](#) [List](#) [Blockquote](#) [Code](#) [HTML](#) [advanced help »](#)

Links Images Styling/Headers Lists Blockquotes Code HTML [advanced help »](#)

I am having a problem with getting this code to work.

```
if (x) {  
  print("here is some sample code!")  
};
```

Thank you.

Novice writes
question

Novice selects
to post their
question

Would you like an experienced Stack Overflow user to help refine your question before you post it? They're here to help!

No, just post my question

Yes, join mentorship chat

Novice writes
question

Novice selects
to post their
question

Novice
selects to join
Help Room



Mason

Why aren't my arrays showing updates?

tags: javascript

Hello, can you please help?

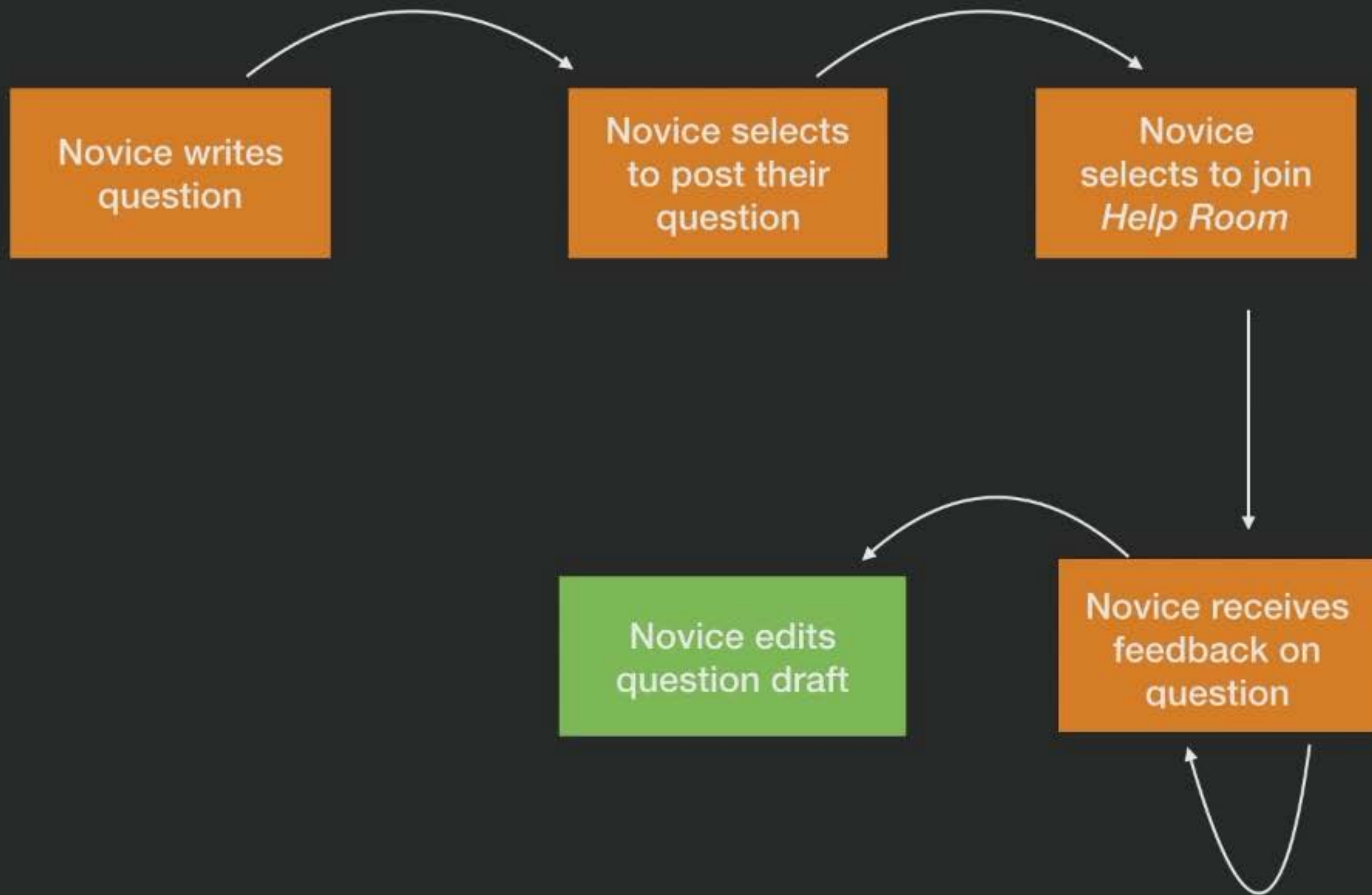
```
if (x) {  
  print ("hello world!")  
};
```

edit copy draft back to Stack Overflow

Hey @Mason, thanks for coming. :) This is the Stack Overflow chat room we're using to help people improve their questions. This message is automated but everything else is real! Before we start: do you have any particular concerns, or are you just double-checking before you post?

Issa

Hey there @Mason! I'm here to help you with your question. Gimme a sec while I read over it.



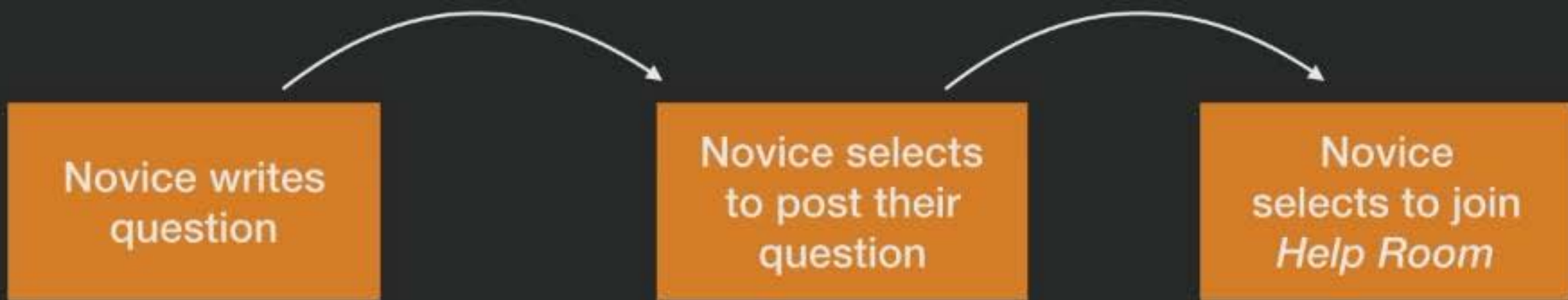
Novice writes question

Novice selects to post their question

Novice selects to join *Help Room*

Novice edits question draft

Novice receives feedback on question



Message in [B] Asking a Question


Edit

```
# Why aren't my arrays showing updates?  
tags: javascript  
Hello, can you please help?  
  
    if (x) {  
        print ("hello world!")  
    };  
  
Thank you!
```

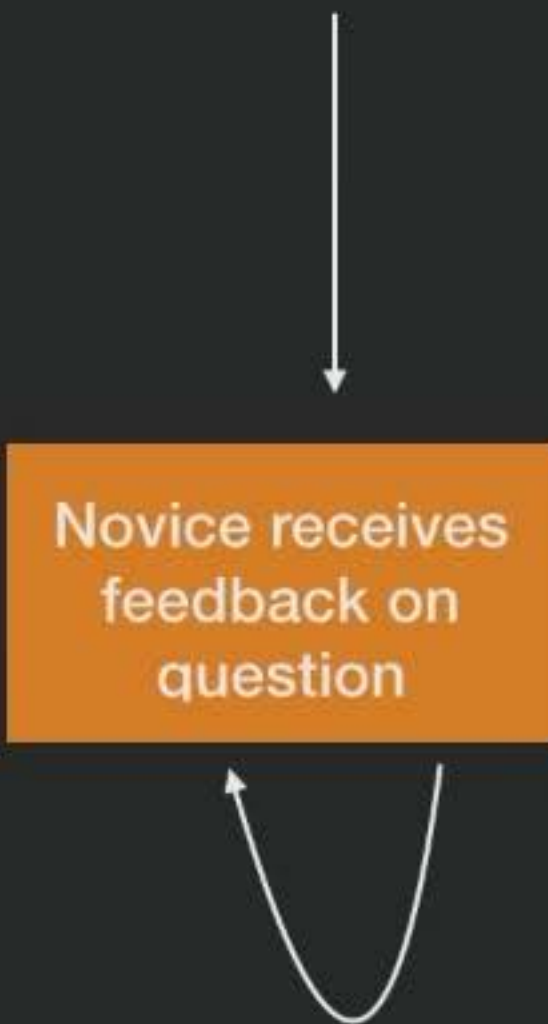
Save Draft

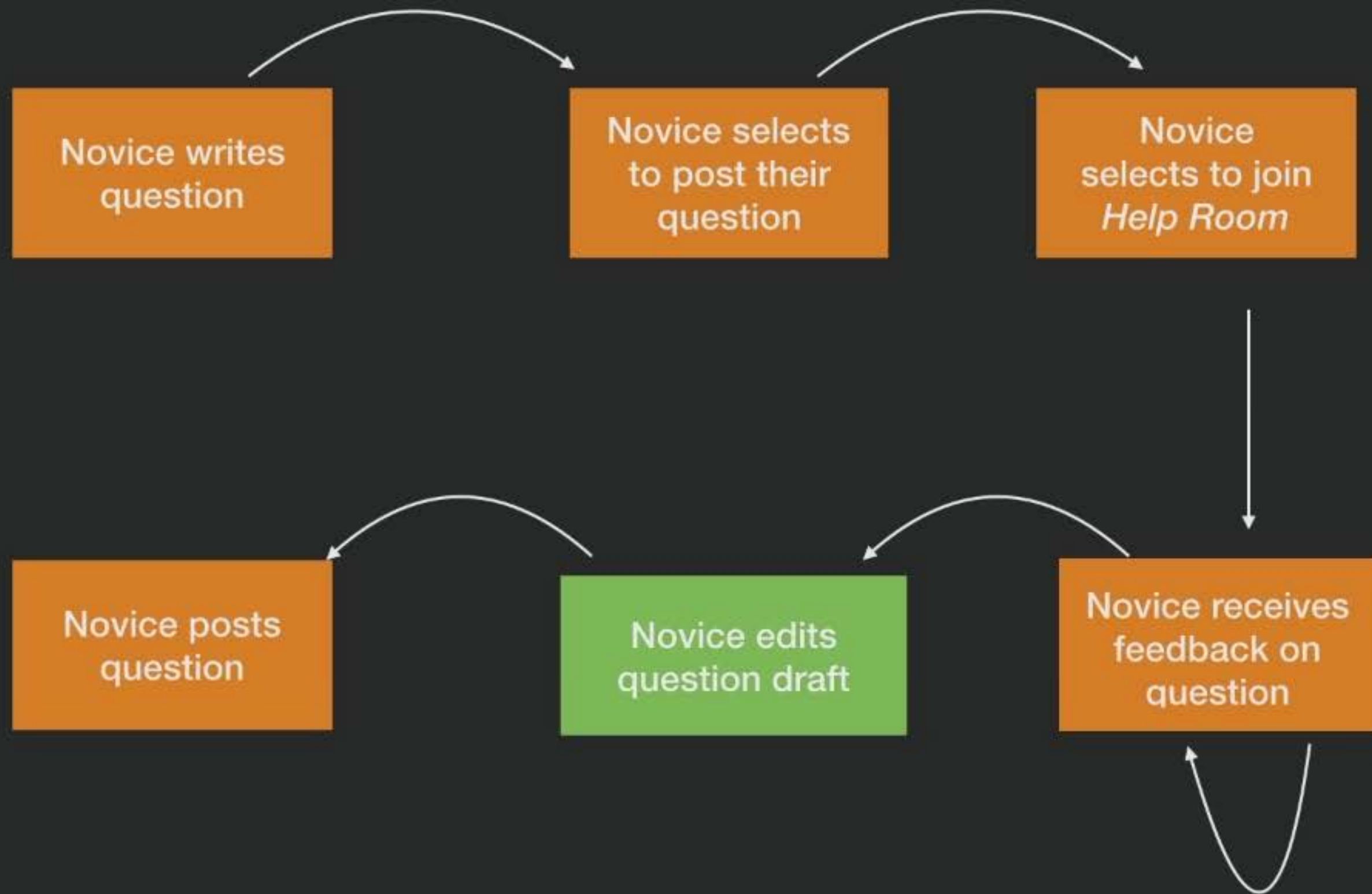
You can format your posts using Markdown, [as described in our help center](#).

A few basics: you can apply inline code formatting using "backticks", and create code blocks by indenting with four spaces. Links are like this: [click here](http://example.com).

Mason  Mon 3:42 PM

Why aren't my arrays showing updates?
tags: javascript







33 day study

4 *Help* Rooms

1 *Private Mentor*
Room



33 day study

4 *Help* Rooms

1 *Private Mentor*
Room



71,068
Eligible Novices



520
Entered Room

DATA COLLECTED



33 day study

4 *Help* Rooms

1 *Private Mentor*
Room



71,068
Eligible Novices



520
Entered Room



271 Novices



63 Mentors



33 day study

4 *Help* Rooms

1 *Private Mentor*
Room



71,068
Eligible Novices



520
Entered Room



271 Novices

63 Mentors

343
conversations



Transcripts + Question Scores



Surveyed Novices



Interviewed Mentors

MENTORED QUESTIONS HAVE HIGHER QUALITY. ⁴⁷



MENTORED QUESTIONS
HAD A **50% SCORE**
INCREASE ON
AVERAGE



GOOD

NEUTRAL

BAD

mentored	25%	49%	25%
not mentored (control)	18%	51%	30%

$\chi^2 = 7.48, p = 0.023$

[CHI 2018]

MENTORS SUGGEST HIGH-FIDELITY IMPROVEMENTS. ⁴⁸

Paraphrasing title and content (Question Phrasing)

Formatting code to make question scannable

Community triage

Including all the pieces of a question (Question Framing)


Culture of asking

“ok the fact is that on SO you can't ask for libs you would need to do that on another site [link]” (Mentor)


bash csh

share edit flag

edited Mar 4 '17 at 9:51

 Cœur
12.4k 3 79 113

asked Apr 26 '10 at 2:23

 Daniel
336 3 5 18

closed as off-topic by bummi, Toto, Petr Janeček, keyser, mehow Sep 3 '13 at 12:49

This question appears to be off-topic. The users who voted to close gave this specific reason:

- "Questions on **professional server- or networking-related infrastructure administration** are off-topic for Stack Overflow unless they directly involve programming or programming tools. You may be able to get help on [Server Fault](#)." – Toto, Petr Janeček, keyser, Community

If this question can be reworded to fit the rules in the [help center](#), please [edit the question](#).

1 **More appropriate for Super User or Server Fault?** – sblom Apr 26 '10 at 2:26

“ok the fact is that on SO you can't ask for libs you would need to do that on another site [link]” (Mentor)



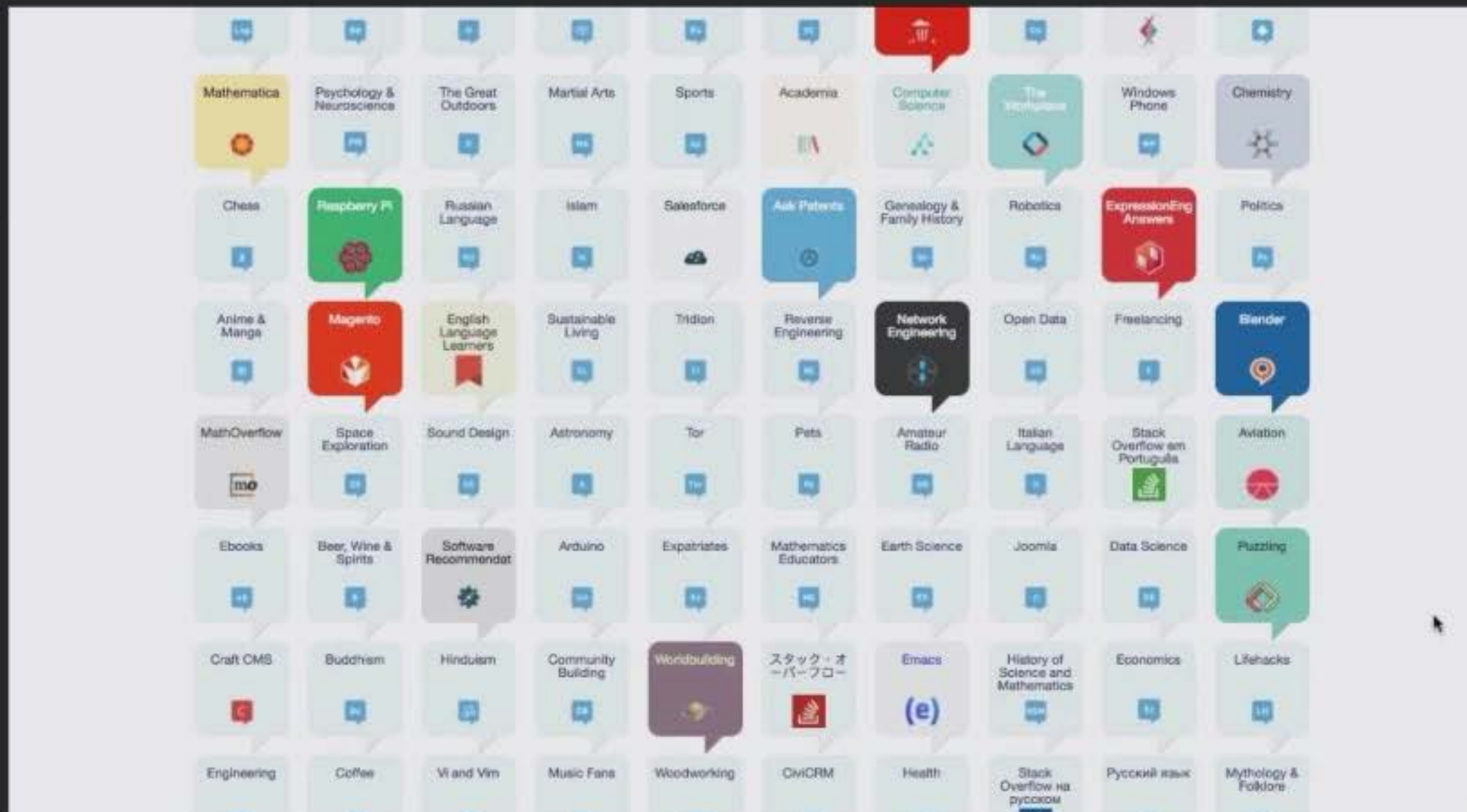
“ok the fact is that on SO you can't ask for libs you would need to do that on another site [link]” (Mentor)



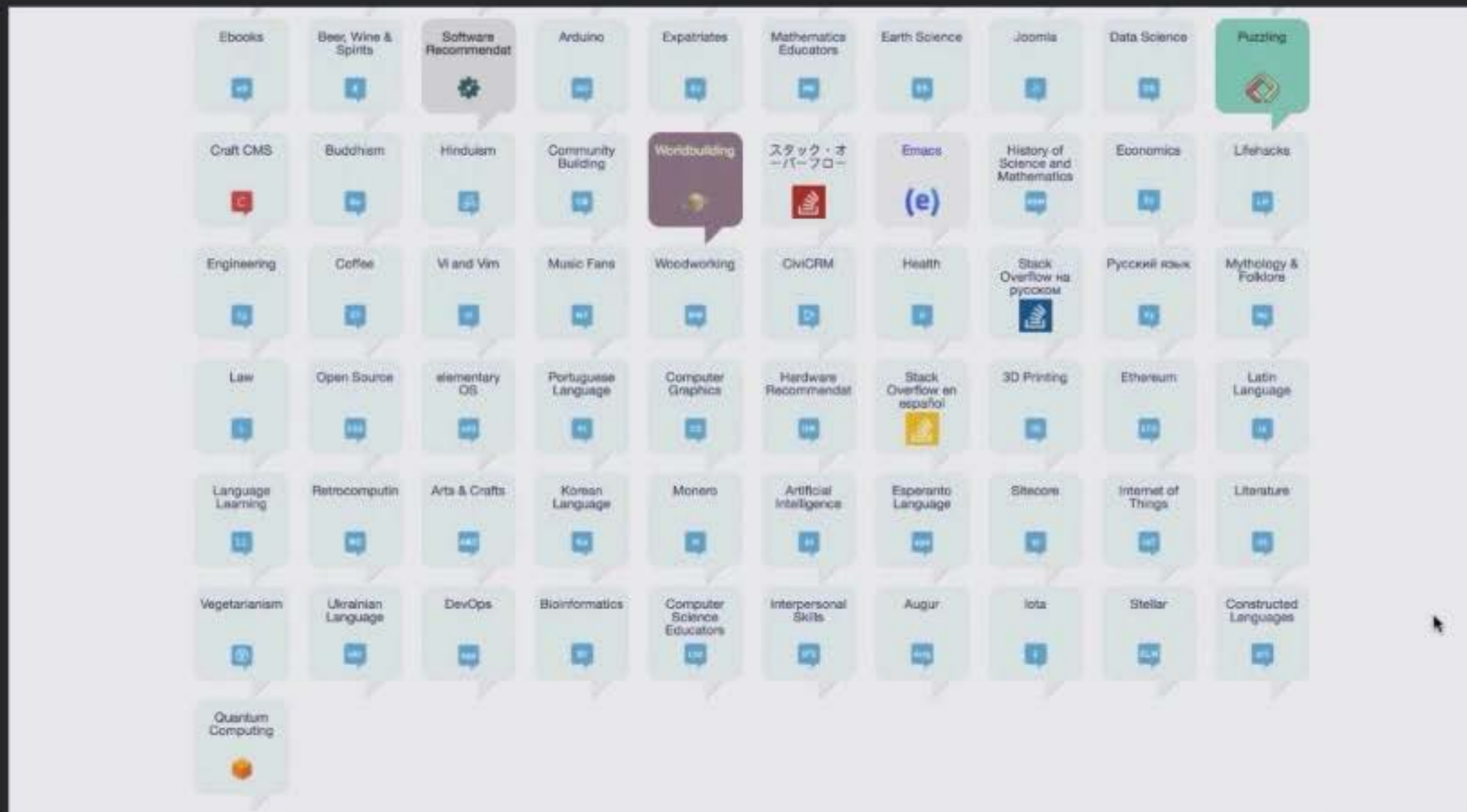
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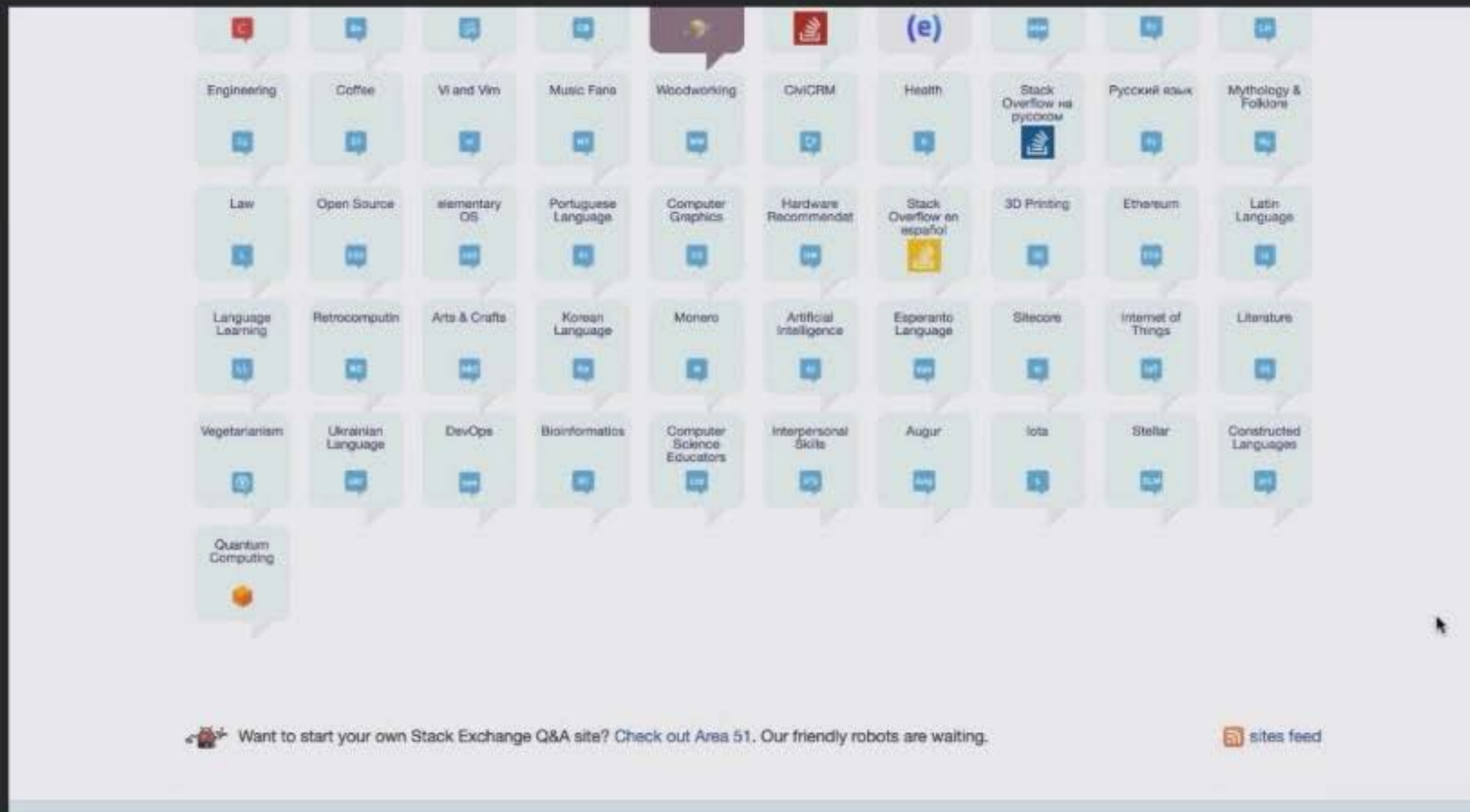
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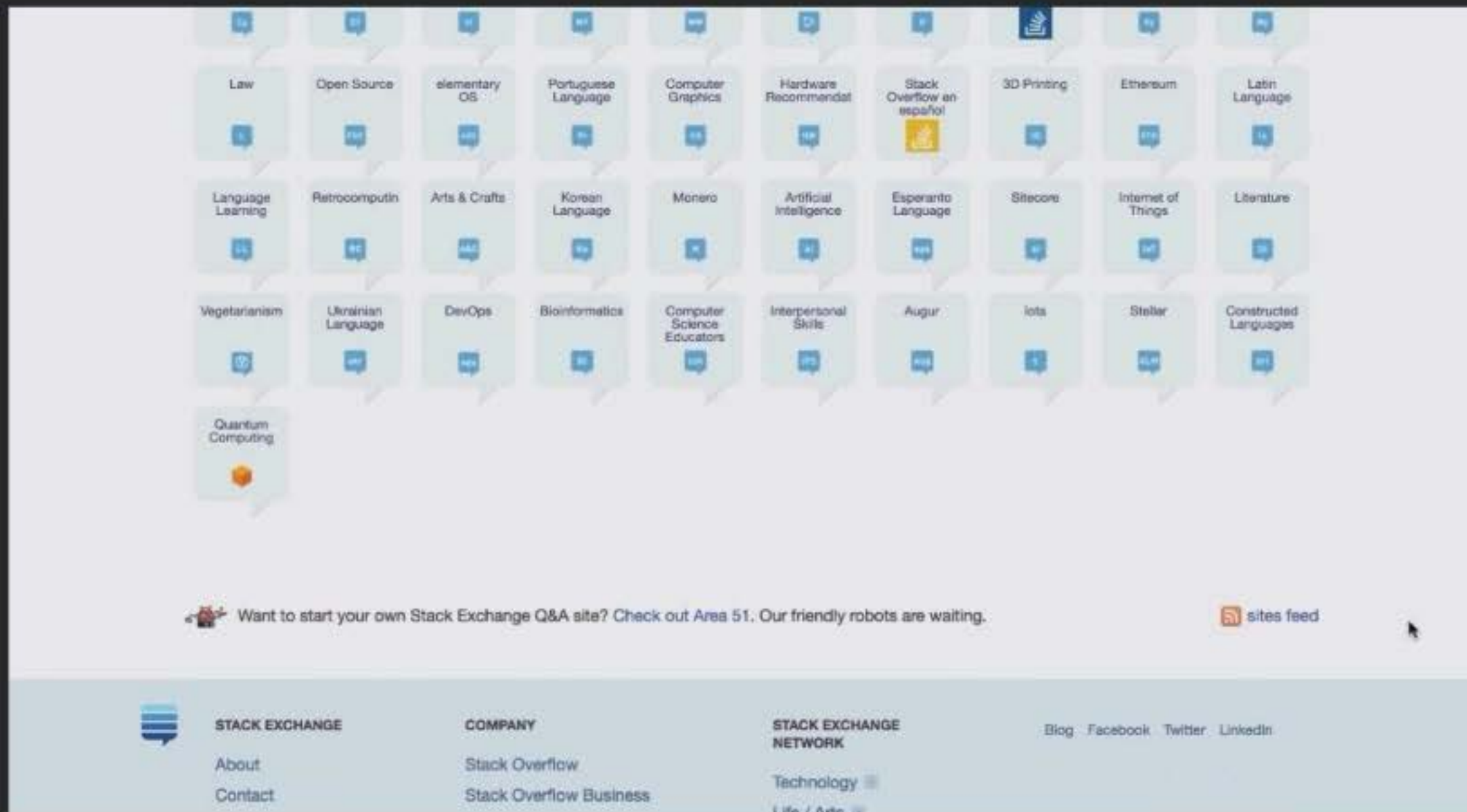
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“ok the fact is that on SO you can't ask for libs you would need to do that on another site [link]” (Mentor)



COMMUNITY TRIAGE

“ok the fact is that on SO you can't ask for libs you would need to do that on another site [link]” (Mentor)



“ok the fact is that on SO you can't ask for libs you would need to do that on another site [link]” (Mentor)



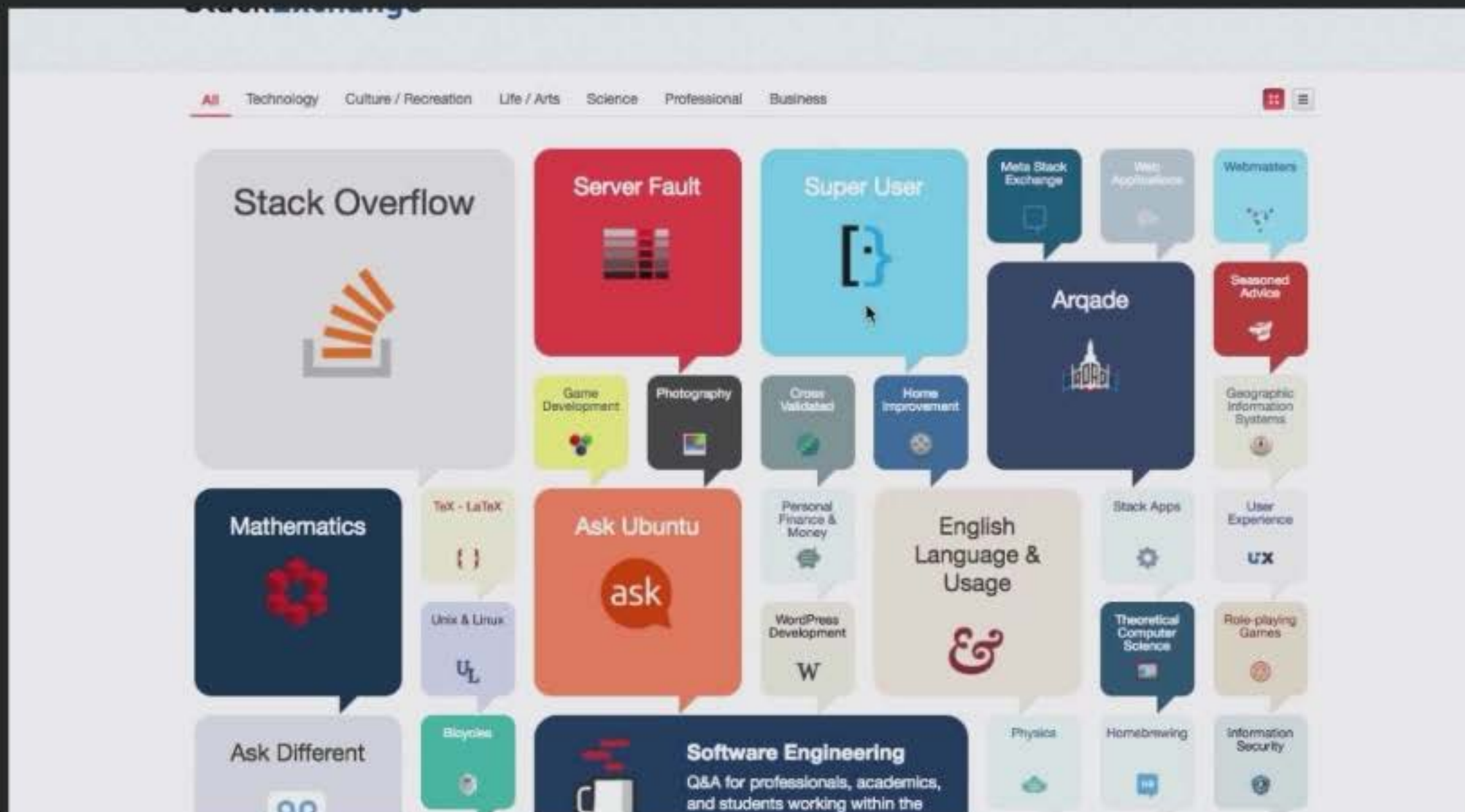
“ok the fact is that on SO you can't ask for libs you would need to do that on another site [link]” (Mentor)



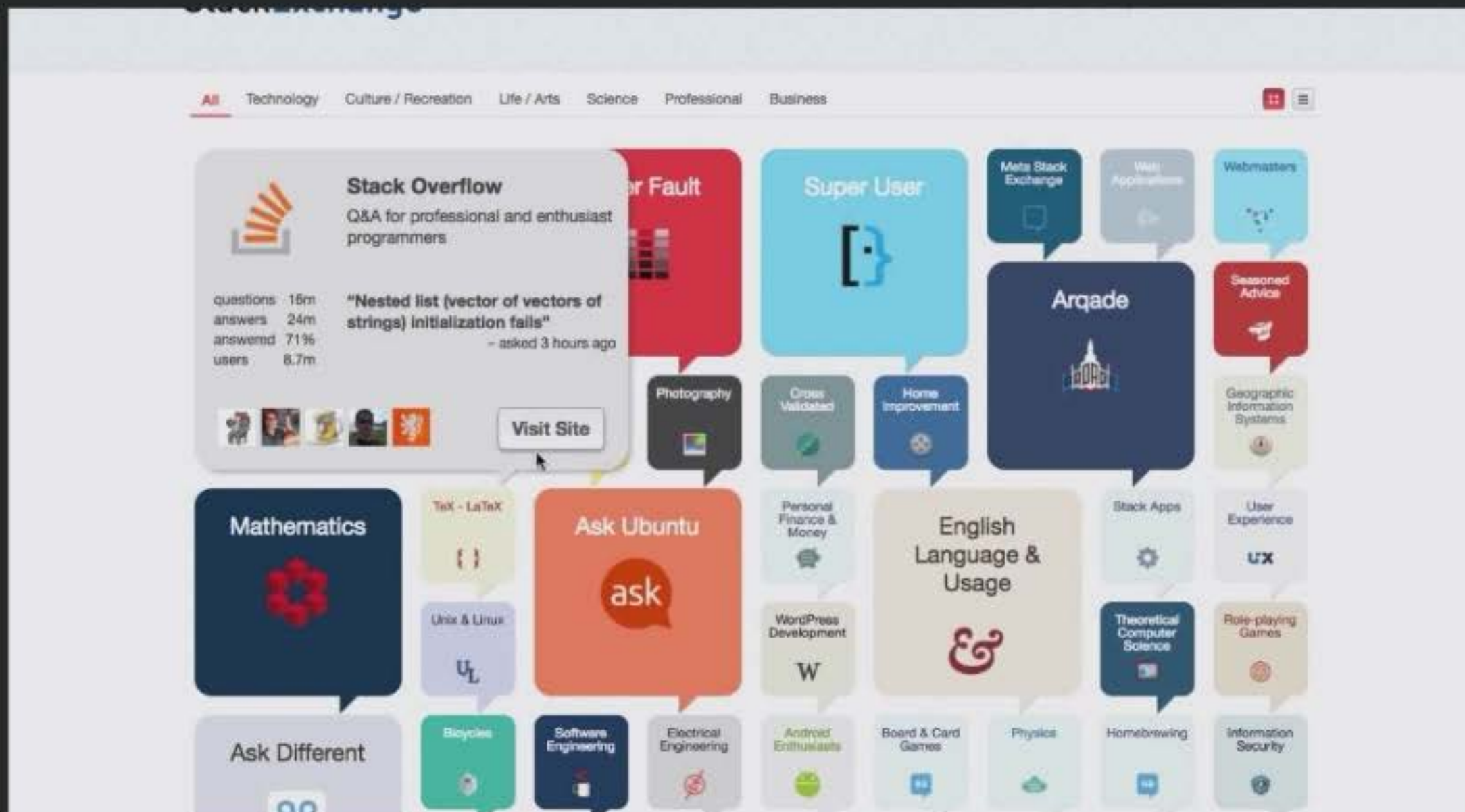
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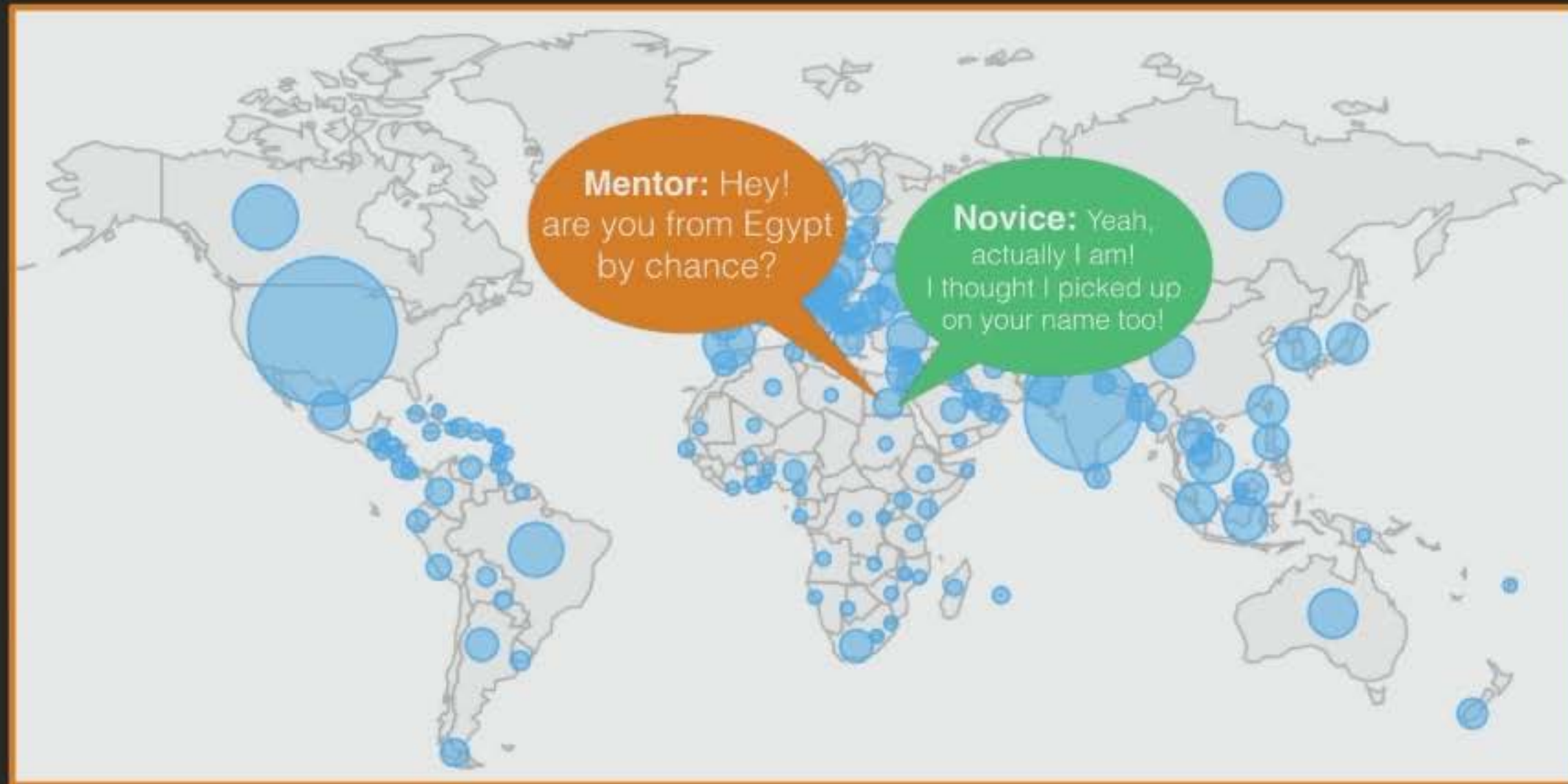


“ok the fact is that on SO you can't ask for libs you would need to do that on another site [link]” (Mentor)

“How do I hack a wifi password?” (Novice)

“Your question is **off topic** here. We're not a hacking service.”(Mentor)

Mentors used identity as a signal. How and why?



Mentors used identity as a signal. How and why?



IMPACT OF JUST-IN-TIME MENTORSHIP

Stack Overflow Isn't Very Welcoming. It's Time for That to Change.



by Jay Hankon on April 26, 2018



6.5K

We <3 and believe in Stack Overflow. But sometimes, loving something means caring enough to admit that it has a problem.

Let's start with the painful truth:

- Too many people experience Stack Overflow¹ as a hostile or elitist place, especially newer coders, women, people of color, and others in marginalized groups.
- Our employees and community have cared about this for a long time, but we've struggled to talk about it publicly or to sufficiently prioritize it in recent years. And results matter more than intentions.

EVP acknowledges community challenge how mentorship forged a new experience

Resulted in Question Asking Template for Novices

Tags Title **Question** Review

Tell us more about your question

Your description gives people the information they need to answer your question.

Guided Mode

Summarize the problem.

Provide background and tell us what you've already tried.

Show your code.

Describe expected and actual results.

Include details about your goals and problem. For example:

- ✓ Say "I'm setting up a new server, and want to support UTF-8 fully in my web application. Where do I need to set the encoding/chars?"
- ✗ Don't say "I want to support UTF-8 fully in my web application."

Want more help? Check out these examples of great question descriptions.

Post

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- Our employees and community have cared about it publicly or to sufficiently prioritize our intentions.



Julia Silge
@julasilge

Follow

Probably my favorite academic research partnership to date was the mentorship experiment, headed up by [@kristinalustig](#) and [@DenaeFord](#). We are excited to be more organized from here on out to make space for more great projects! 🎉



Mentorship Research Project - Results + Wrap-Up
Check out SO Podcast 117 to hear Kristina talk about the mentorship experiment. First, if you haven't read the original announcement post about the Stack Overflow ...
meta.stackoverflow.com

EVP acknowledges
challenge how
forged a new
experience

Resulted in Question
Asking Template for
Novices

over your question.

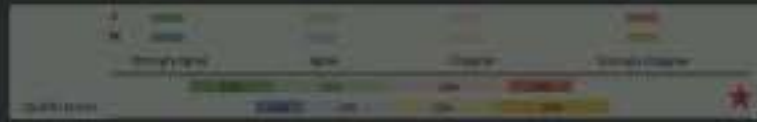
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Post

TODAY



Barriers to Participation

[Ford, Smith, Guo, Parnin. FSE 2016]



Mentorship

[Ford, Lustig, Banks, Parnin. CHI 2018]



Vision


The Future of Asking

r igraph network-analysis

share edit



asked Aug 30 '16 at 20:57

 Abby Jones
1

active oldest votes

QUESTION

I think the actual problem may be an off-by-one error for the theoretical max. Calculating it manually gives you $3 * 4 = 12$, which agrees with use of `centralize(normalize=FALSE)`, but the R output from `centralization.degree` seems to be $4 * 5 = 20$. To solve your problem I'd suggest using the following code to normalize it yourself.

```
> newCentralization = function(h) centralize(degree(h),normalize=FALSE)/((vcount(h)-1)*(vcount(h)-2))
> newCentralization(h)
[1] 1

> sessionInfo()
  attached base packages:
[1] stats      graphics  grDevices  utils      datasets  methods   base
[1] igraph_1.0.1
```

share edit

ANSWER


answered Sep 2 '16 at 5:16

 Patricia Jones
26 • 2






Thanks so much Patricia! – Abby Jones Sep 7 '16 at 17:06

BLOG

 A Tale of Two In
Programming La
Between Wealth

FEATURED ON META

-  Sunsetting Docu
-  Should we burni
-  Documentation i
next?

Linked

1935 How to make a g
example?

Related

3 Sort and subset r
property in R usin

5 Changing node/v
R

5 Using geo-coordi
coordinates in th


0 r and igraph Help
with Weighted Ed

r igraph network-analysis

share edit



asked Aug 30 '16 at 20:57

 Abby Jones
1

active oldest votes

QUESTION

BLOG

A Tale of Two In Programming La Between Wealth

FEATURED ON META

Sunsetting Docu

Should we burni

Documentation i xt?

ver

I think the act manually give output from c the following

```
> newCentral
> newCentral
[1] 1
```

```
> sessionInfo()
  attached base packages:
[1] stats    graphics grDevices utils    datasets methods base
[1] igraph_1.0.1
```

share edit

ANSWER

answered Sep 2 '16 at 5:16

 Patricia Jones
26 • 2



Related

3 Sort and subset property in R using

5 Changing node/v R

5 Using geo-coordi coordinates in the

0 r and igraph Help with Weighted Ed

Women who experience peer parity re-engage sooner.

Thanks so much Patricia! – Abby Jones Sep 7 '16 at 17:06

What does asking
for help in the
future look like?

FUTURE OF ASKING FOR TECHNICAL HELP

59

SO Mentorship [CHI 18]
SO Compiler Errors [FSE 18]
SO Barriers [FSE 16]
Frustrated Devs [CHASE 15]

GH Signals [ICSE SEIS 19]
Peer Parity [VLHCC 17]

Characterizing Devs [ESEM 17]
Tool Notifications [FSE 16]

**Social
Computing**

**Software
Engineering**

**Identity
Signals**

Identity
Movements [CSCW 18]

Interview Eye-Tracking [ICSE NIER 18]
Tech Talk [CHASE 17]
Sustained Attention [EMIP 15]

"Software is being developed by increasingly distributed and increasingly diverse groups of individuals."

- Vasilescu

Social
Computing

Engineering

Identity
Signals

"Software is being developed by increasingly distributed and increasingly diverse groups of individuals."

- Vasilescu

How a programmer's identity is presented will become increasingly influential.

- Ford

1. HOW DO WE USE IDENTITY CUES TO TRUST CODE FROM STRANGERS?

ICMMI 2019 conference@smssi.net via ier-institute.net Sat, Feb 9, 3:23 PM (3 days ago) to me

Why is this message in spam? It is similar to messages that were identified as spam in the past.

Report not spam

Overview Repositories (RS) Show all

Popular repositories

class (RE)

1,075 contributions in the last year

Abby (DN)

TicTacToe / TicTacToe

Class (PT) Process 1 Wiki Insights 1

Add test case to check turn #1158

Abby wants to merge 1 commit (TM) 2017-02-09 15:23:23 UTC


Changes from 1 commit + Jump (SD) +02 -0 changes

Add test case to check turn

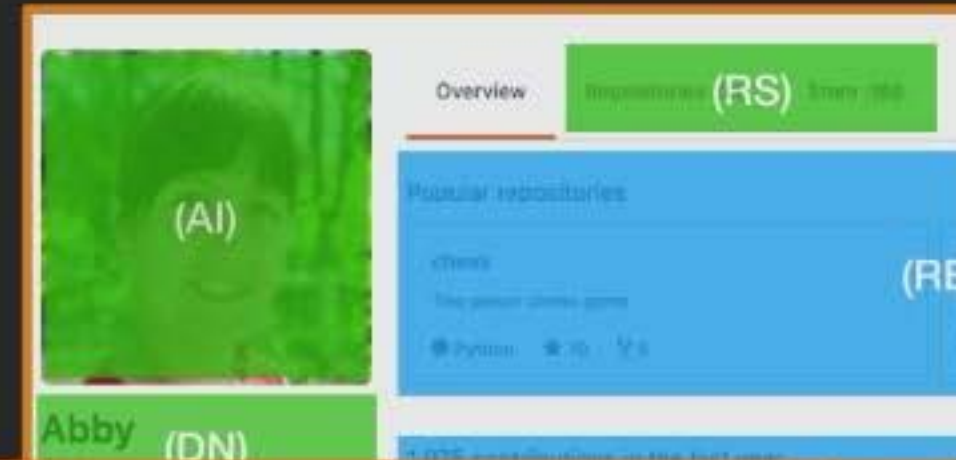
Abby submitted a (UD) 2017

```
@@ -1,1 +1,1 @@
- 1
+ 1
```

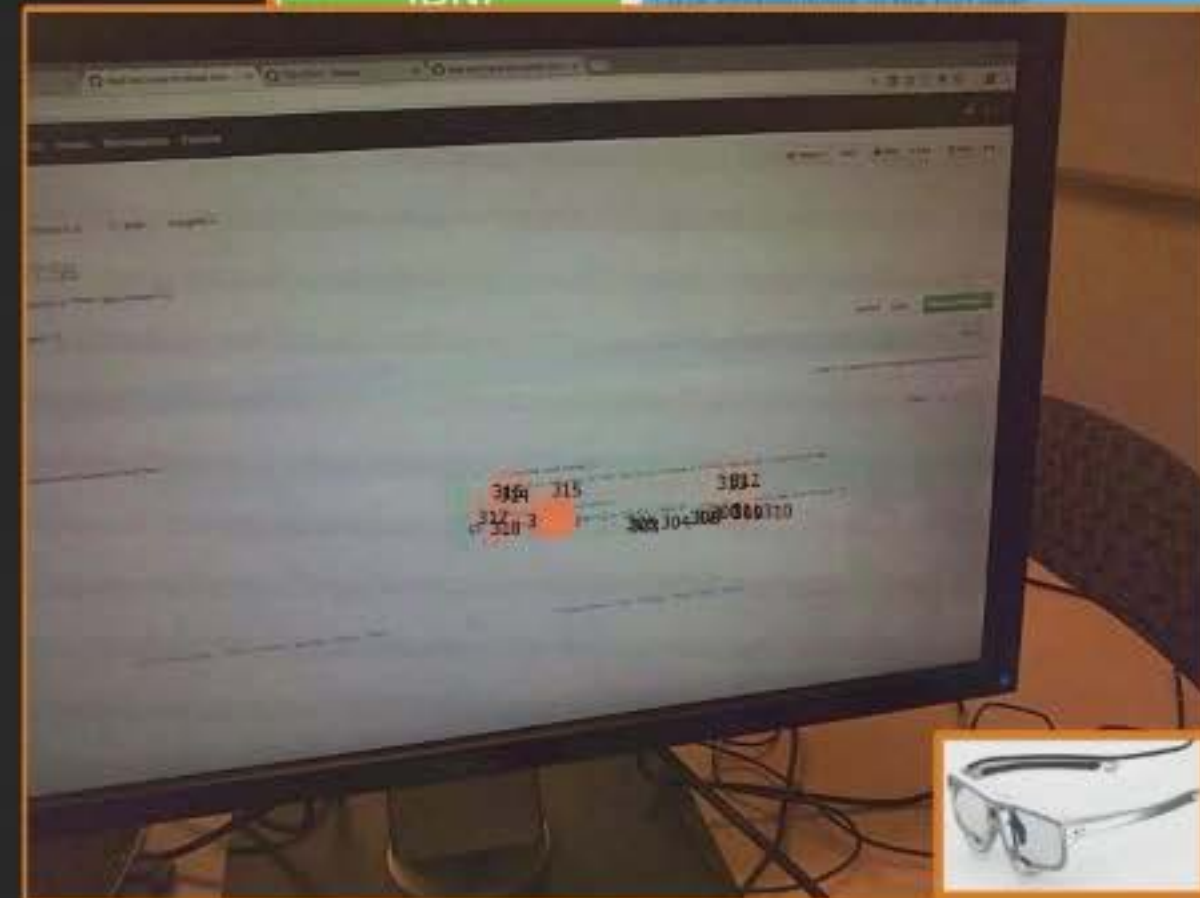
(BC)



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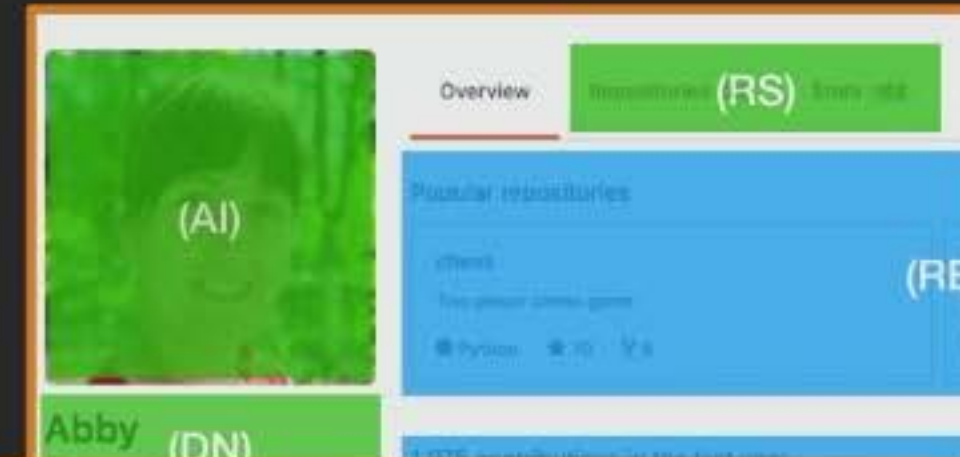


How do signals change based on "code" attributes?



[ICSE SEIS 2019]

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How do signals change based on "code" attributes?

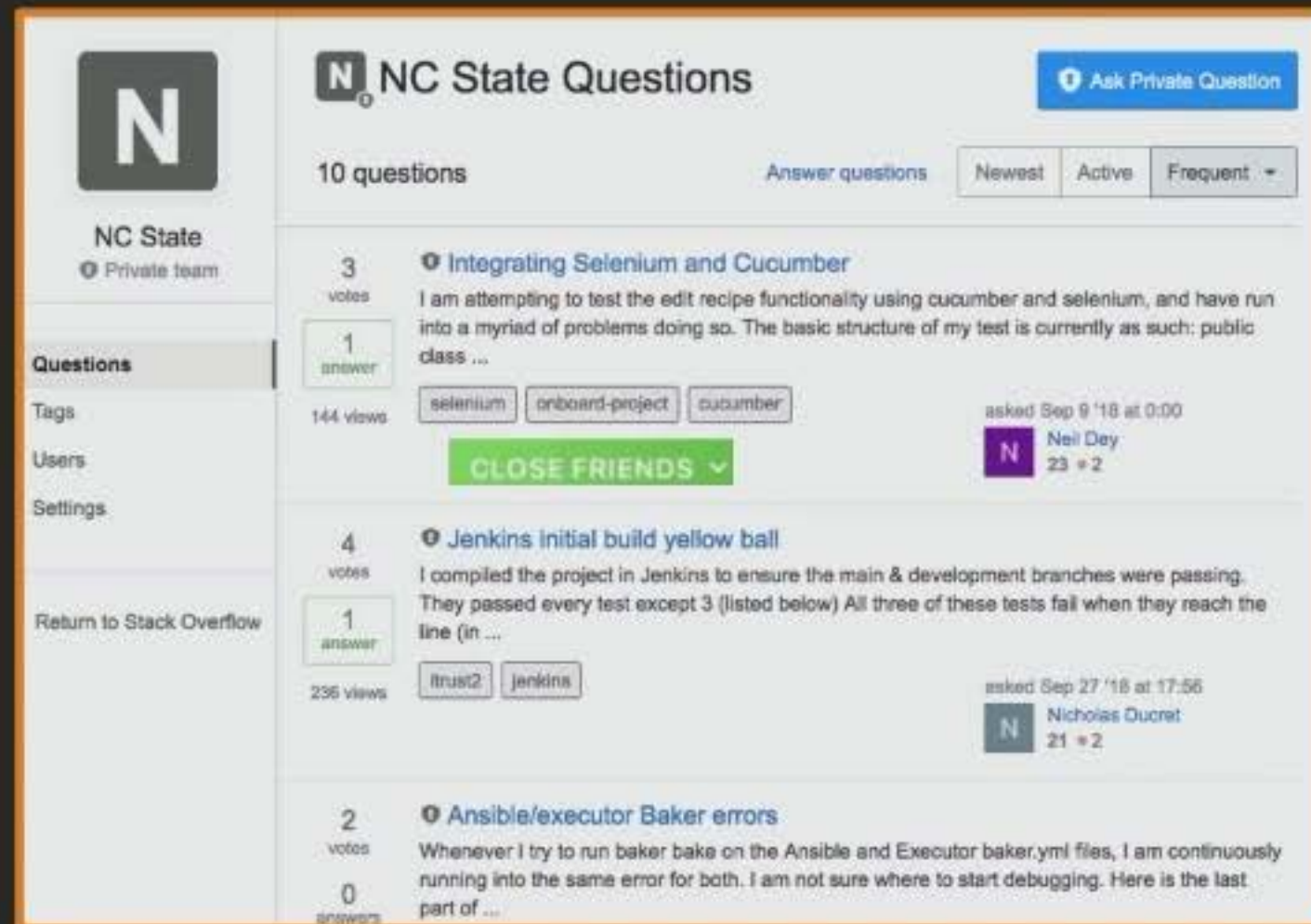
How can we build tools to better reflect contributions?



[ICSE SEIS 2019]

2. HOW CAN WE NATURALLY TRANSITION BETWEEN PUBLIC AND PRIVATE HELP SPACES?

How does asking change when audience is specialized?



The screenshot shows a private Stack Overflow team page for 'NC State'. The page header includes the team logo (a grey square with a white 'N'), the team name 'NC State', and a 'Private team' indicator. A blue button labeled 'Ask Private Question' is in the top right. Below the header, there are navigation options: '10 questions', 'Answer questions', and a dropdown menu with 'Newest', 'Active', and 'Frequent'. The main content area lists three questions, each with a private icon (a grey circle with a white 'N').

- Integrating Selenium and Cucumber**: 3 votes, 1 answer, 144 views. The question text is partially visible: "I am attempting to test the edit recipe functionality using cucumber and selenium, and have run into a myriad of problems doing so. The basic structure of my test is currently as such: public class ...". It has tags for 'selenium', 'onboard-project', and 'cucumber'. The asker is Neil Dey, asked Sep 9 '18 at 0:00. A green 'CLOSE FRIENDS' button is visible below the question.
- Jenkins initial build yellow ball**: 4 votes, 1 answer, 236 views. The question text is partially visible: "I compiled the project in Jenkins to ensure the main & development branches were passing. They passed every test except 3 (listed below) All three of these tests fail when they reach the line (in ...". It has tags for 'trus2' and 'jenkins'. The asker is Nicholas Ducret, asked Sep 27 '18 at 17:56.
- Ansible/executor Baker errors**: 2 votes, 0 answers. The question text is partially visible: "Whenever I try to run baker bake on the Ansible and Executor baker.yml files, I am continuously running into the same error for both. I am not sure where to start debugging. Here is the last part of ...".

2. HOW CAN WE NATURALLY TRANSITION BETWEEN PUBLIC AND PRIVATE HELP SPACES?

How does asking change when audience is specialized?

How does *segmented* anonymity become more helpful in these spaces?

The screenshot shows a Stack Overflow page for a private team named 'NC State'. The page title is 'NC State Questions' and it contains 10 questions. The left sidebar shows the team name 'NC State' with a 'Private team' indicator, and navigation links for 'Questions', 'Tags', 'Users', 'Settings', and 'Return to Stack Overflow'. The main content area lists three questions:

- Integrating Selenium and Cucumber**: 3 votes, 1 answer, 144 views. The question text is partially visible: "I am attempting to test the edit recipe functionality using cucumber and selenium, and have run into a myriad of problems doing so. The basic structure of my test is currently as such: public class ...". It has tags for 'selenium', 'onboard-project', and 'cucumber'. The asker is Neil Dey, asked Sep 9 '18 at 0:00. A red box highlights the 'CLOSE FRIENDS' audience selector.
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How do we manage context collapse across platform?

The image shows two overlapping screenshots from GitHub. The top screenshot is a profile page for Jess Frazelle (jessfraz). It features a profile picture of a woman, a 'Busy' status indicator, and a 'CLOSE FRIENDS' dropdown menu. Below the profile is a 'Follow' button. The right side of the profile shows 'Pinned repositories' including 'dockerfiles' and 'genuinetools/img'. The bottom screenshot is a public question from user Krystal, dated January 31 at 4:58 PM, asking 'What enterprise JAVA sdks are people using now?'. It includes 'Like' and 'Comment' buttons and a text input field for a comment.

3. HOW DO WE EMPOWER MARGINALIZED PROGRAMMERS IN VIRTUAL TECH SPACES?



#ILookLikeAnEngineer

[CSCW 2018]

3. HOW DO WE EMPOWER MARGINALIZED PROGRAMMERS IN VIRTUAL TECH SPACES?



Where are they seeking technical help?

[CSCW 2018]

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[CSCW 2018]

AskQuestions.Tech

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About AskQuestions.Tech

The inclusive place to ask tech questions.

R Studio Community

Always Be Civil

Nothing sabotages a healthy conversation like rudeness:

[Got live help!](#) These Python Tutor users are asking for help right now. Please volunteer to help!

- [user_ae5](#) from Denver, Colorado, US needs help with Python3 - 2 people chatting - [click to help](#)
- [user_3b5](#) from Valencia, Spain needs help with Python3 - 2 people chatting - [click to help](#) (active)
- [user_38b](#) from Youngstown, Ohio, US needs help with Python3 - 2 people chatting - [click to help](#)
- [user_794](#) from Charlotte, North Carolina, US needs help with Python3 - [click to help](#) (idle) last active
- [user_384](#) from London, Ontario, UK needs help with Python3 - [click to help](#) (idle) last active

[Start private chat](#)

[How do I use this?](#)

Where are they seeking technical help?

How can we make our communities more like those spaces?

3. HOW DO WE EMPOWER MARGINALIZED PROGRAMMERS IN VIRTUAL TECH SPACES?



AskQuestions.Tech

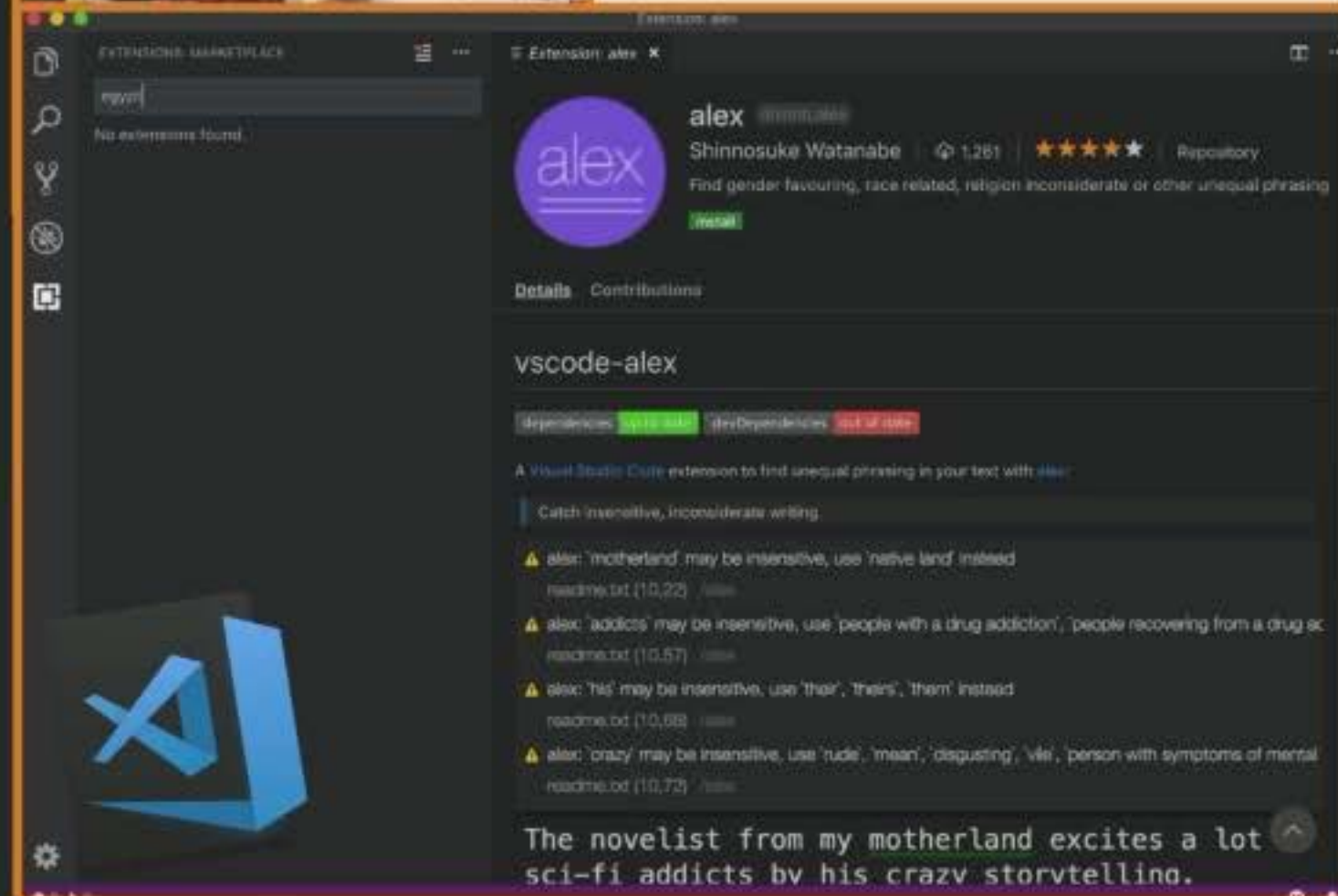
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About AskQuestions.Tech

The inclusive place to ask tech questions.

I HELP BUILD ENTERPRISE SOFTWARE

Where are they seeking technical help?



EXTENSIONS MARKETPLACE

alex

Shinnosuke Watanabe | 1,261 | 5 stars | Repository

Find gender favouring, race related, religion inconsiderate or other unequal phrasing

Details Contributions

vscode-alex

A Visual Studio Code extension to find unequal phrasing in your text with alex.

Catch insensitive, inconsiderate writing

- alex: 'motherland' may be insensitive, use 'native land' instead
- alex: 'addicts' may be insensitive, use 'people with a drug addiction', 'people recovering from a drug addiction'
- alex: 'his' may be insensitive, use 'their', 'theirs', 'them' instead
- alex: 'crazy' may be insensitive, use 'rude', 'mean', 'disgusting', 'vile', 'person with symptoms of mental'

The novelist from my motherland excites a lot sci-fi addicts by his crazy storvtelling.

How can we make our communities more like those spaces?

How can we encourage programmers to build these types of platforms?

SUMMARY

Online Q&A communities are widely used, but present barriers of **unfamiliar norms** can leave programmers, specifically novices and women discouraged from participating.

[FSE 2016]

Just-in-time mentoring provided novices with help to ask a well-received question, precisely when they needed it.

[CHI 2018]

Vision: How can we empower, connect, and give control back to the users by constructing participation around **identity signals** ?

<http://denaeford.me>

denae_ford@ncsu.edu



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[FSE 2016]



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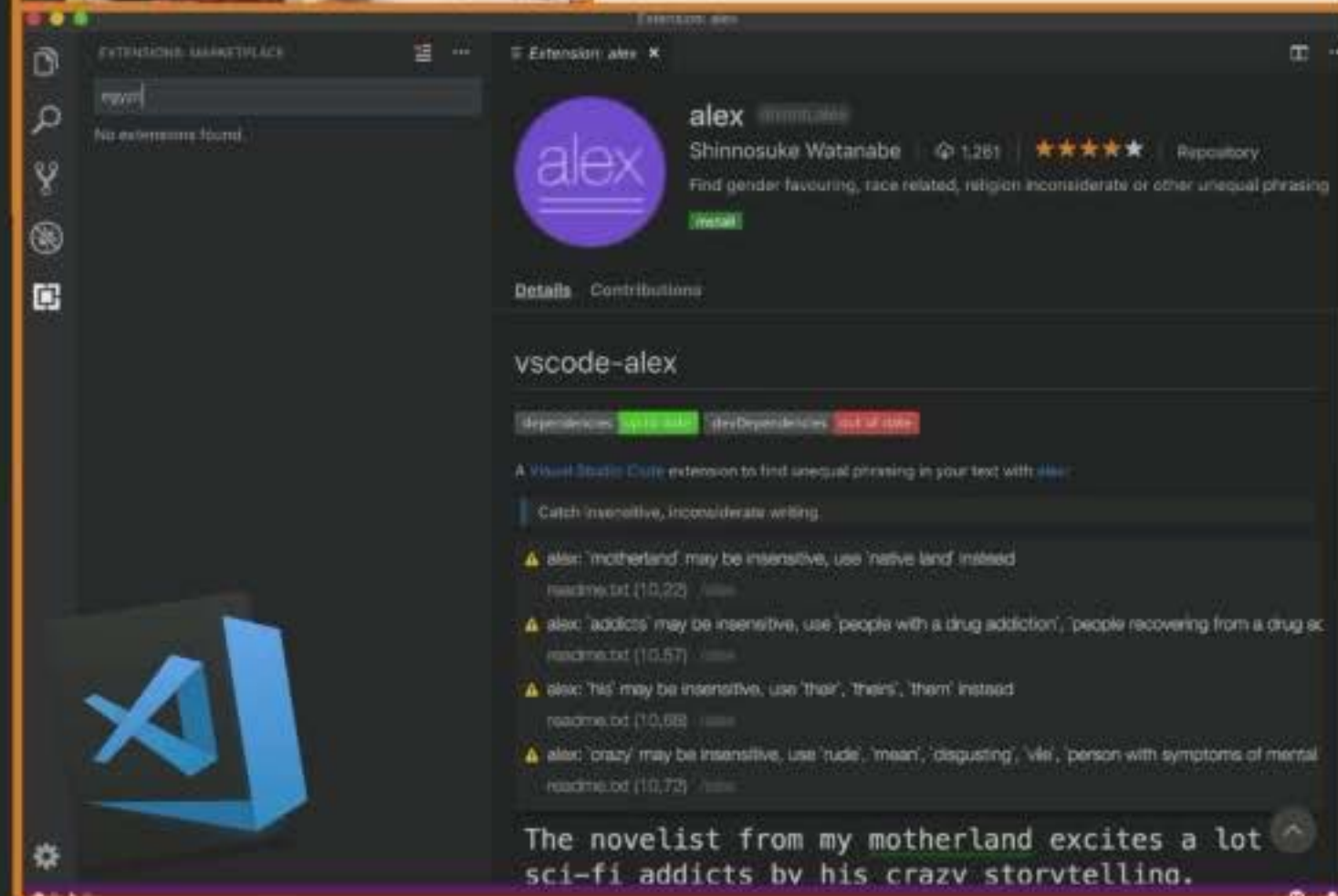
AskQuestions.Tech

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About AskQuestions.Tech
The inclusive place to ask tech questions.

The screenshot shows a website header with navigation links and a main heading. Below the heading is a grid of small images of diverse people. A larger image shows a woman holding a sign that says "I HELP BUILD INTERSPECIES COMMUNITIES".

Where are they seeking technical help?



alex Shinnosuke Watanabe | 1,261 | ★★★★★ | Repository
Find gender favouring, race related, religion inconsiderate or other unequal phrasing

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readme.txt (10,68)
- alex: 'crazy' may be insensitive, use 'rude', 'mean', 'disgusting', 'vile', 'person with symptoms of mental'
readme.txt (10,72)

The novelist from my motherland excites a lot sci-fi addicts by his crazy storvtelling.

The screenshot shows the VS Code Extensions Marketplace page for the 'alex' extension. It includes the extension's name, author, version, and a list of recent updates with their descriptions.

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How can we encourage programmers to build these types of platforms?