

Building diverse engineering teams

Graham Gilbert / 2024-06-20

The views expressed in this talk are my own and do not necessarily reflect those of my employer

So before we kick off, a quick disclaimer: The views expressed in this talk are my own and do not necessarily reflect those of my employer

> whoami

I'm Graham

Client Engineering at Airbnb

londonappleadmins.org.uk

macadmins.io

graham.at/movember

Hi! I'm Graham, and I'm a Senior Tech Lead Manager at Airbnb on the Client Engineering team. It's been absolutely wonderful to see you all in real life, so thank you to Mat and the rest of the MacDevOps team.

I am one of the co-founders of London apple admins, I am on the board for Mac admins open source, and I am also a testicular cancer survivor and a Movember fundraiser.

Testicular cancer is the most common form of cancer in young men - so common in fact that I've been contacted by two more people in the past year in our community who are going through their own battle with the disease. The Mac admin community isn't very big, so that goes to show how common it is. Cutting off someone's testicle isn't really a cure. It's pretty medieval if you ask me. The only way we are going to find a cure for this is by funding research and awareness campaigns. So gents, please check yourself, and if any of you find this talk useful in any way, please consider donating. And today we are going to talk about building more diverse engineering teams

Why are you talking about this?

I'm sure more than one of you are sitting there thinking "Why is this talk at a tech conference?" Or "why does this white, bearded, cisgendered, male tech worker want to talk about this?"

Well, first off let's step back and think about what our jobs actually are? Sure, at a basic level, it's to make computers work. But who are we doing it for? We're making these things work for our customers - the people who lay hands on keyboards on these devices. So when we're building products for these users, a diverse set of experiences and opinions helps us create tools that account for a wider range of our customers needs. It helps the team be more creative, it reduces groupthink.

At the end of the day, if our teams are nothing like a chunk the people we are building for, how can we build great products for them?

“But I’m not a hiring manager”

You may be thinking that you’re not a people manager, so you cannot do anything to improve the diversity in our community or your organization. You’re wrong. Everyone can help build an environment that is hospitable to a diverse range of people. Even if it’s not at your company, I’ll touch on some things that you can help with in our wider community.



The Job Advert

The place I'd like to start with today is likely to be the first interaction a prospective team member will have with you and your company - the job advert. I look at job adverts all the time to get ideas for my own, and I see some awful ones. I have re-written the job ad for my team to use awful, non-inclusive language.

Who we're expecting,

We need a rockstar Client Engineer to dominate the upcoming iteration of tools and infrastructure handling our macOS, Chrome OS, Windows, and Mobile endpoints. We're a team of ninjas operating on automation, global scale, and outclassing competition. These tools empower Airbnb employees to do the unimaginable while safeguarding our company, Hosts, and guests' information.

What we are looking for,

We are looking for a Client Engineer to help shape and define the next iteration of the tools and infrastructure that manages our macOS, Chrome OS, Windows and Mobile endpoints. We focus on automation, running at a global scale and most importantly, being a host to our end users. Our tools enable Airbnb employees to do amazing things, whilst keeping the company's, our Hosts and Guests information secure.

Here we have the opening sections - the top is the job advert that I've modified (with the help of chat got) to be as non-inclusive as possible.

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First up let's consider the opening headline. Who we are expecting vs what we are looking for. They look like small differences, but the first is saying "we expect you to meet all of these things", where the second is more open and inclusive

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We need a **rockstar** Client Engineer to **dominate** the upcoming iteration of tools and infrastructure handling our macOS, Chrome OS, Windows, and Mobile endpoints. We're a team of **ninjas** operating on automation, global scale, and **outclassing competition**. These tools empower Airbnb employees to do the unimaginable while safeguarding our company, Hosts, and guests' information.

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Let's dig in further - we have words like "rockstar", "dominate", "ninjas" and "outclassing competition". These are aggressive and competitive, and can be unwelcoming or uninviting - particularly to women and minority groups

Applicants should exceed all the benchmarks listed here. We believe in exceptional qualifications and unmatched skill sets. Our high standards mean we value competitive spirit and demonstrated superiority.

Even if you do not meet all the requirements listed here, we still encourage you to apply. We understand that not everyone will have had the same opportunities in their careers, and above all else we value the desire for lifelong learning.

Next up, on the real advert at the bottom, we encourage everyone to apply. In our terrible one at the top, we reiterate that we only want the absolute best of the best of the best to apply. If you do not meet every single little thing we need, do not apply.

Of course in the real world, not everyone has the same opportunities. If you came from a wealthy background, you are more likely to have gone to a fancy college.

Your qualifications,

- Excel in one or more general purpose programming languages, preferably: Swift, Ruby, Python, Go
- Proven experience of managing macOS on a large scale is a must.
 - Extra credit for experience with open source tools (e.g., Munki or Puppet / Chef)
- Possess a security-first mindset, with in-depth knowledge of security principles such as Zero Trust
- Passion for endpoint management using DevOps methodologies.
- Your experience should include:
 - Five years experience of managing Windows using open source tools (e.g., Gorilla / Chocolatey or Puppet / Chef)
 - Proficiency in Google's API to manage Chrome OS
 - Ten years experience with open-source MDM, such as MicroMDM or NanoMDM
 - Ownership of infrastructure in cloud providers such as Amazon Web Services and Google Cloud Platform

Who you are,

- Know one or more general purpose programming languages including but not limited to: Swift, Ruby, Python, Go.
- Experience of managing macOS at scale
 - Bonus points if it's with open source tools (e.g Munki or Puppet / Chef)
- Have a security first mindset, with knowledge of security principles such as Zero Trust
- Passion for endpoint management using DevOps methodologies.
- You may have experience of:
 - Managing Windows using open source tools (e.g Gorilla / Chocolatey or Puppet / Chef)
 - Using Google's API to manage Chrome OS
 - Open source MDM, such as MicroMDM or NanoMDM
 - Bonus points if you have knowledge of the Apple MDM protocol
 - Deploying infrastructure in cloud providers such as Amazon Web Services and Google Cloud Platform

Before moving on, we need to talk about the qualifications section. Determining knowledge in terms of number of years is plain silly. Most people learn skills at different paces, and the majority of skills can be learned on the job. And of course, people will just pluck most of these numbers out of the air - note that our example terrible job advert requires 10 years of open source mdm experience - the first commit to micromdm was 8 years ago. Studies have shown that women in particular are less likely to apply for jobs if they do not meet or exceed all of the requirements listed, especially years of experience requirements.

Tools to help with job advert language

- Textio
- Datapeople
- Gender Decoder (free!)
- Chat-GPT (sometimes)

There are tools that you can use to improve the language for your job ads. I spent a decent amount of time researching these for our own diversity council in my org. We chose one that integrated with our recruiting tools to make it simple for hiring managers to use

In no particular order, and without any recommendation of any tool over the other, here are a few. A couple of commercial tools are textio and data people. They both use AI to process the language of your JD and highlight the parts that you should look at. A free option is gender decoder - they offer a more simple word replacement tool, but it is a great first step. Finally you have your AI chat tool of choice - a word of warning though, sometimes AI can produce the opposite of what you're asking for - as evidenced by my earlier awful job ad examples.

An abstract background composed of various shades of green, ranging from light lime green to dark forest green. The colors are blended in organic, flowing shapes that create a sense of movement and depth. The word "Recruiting" is centered in the middle of this background.

Recruiting

So you've got your job advert online. You just sit back and wait for every kind of person to apply, right?



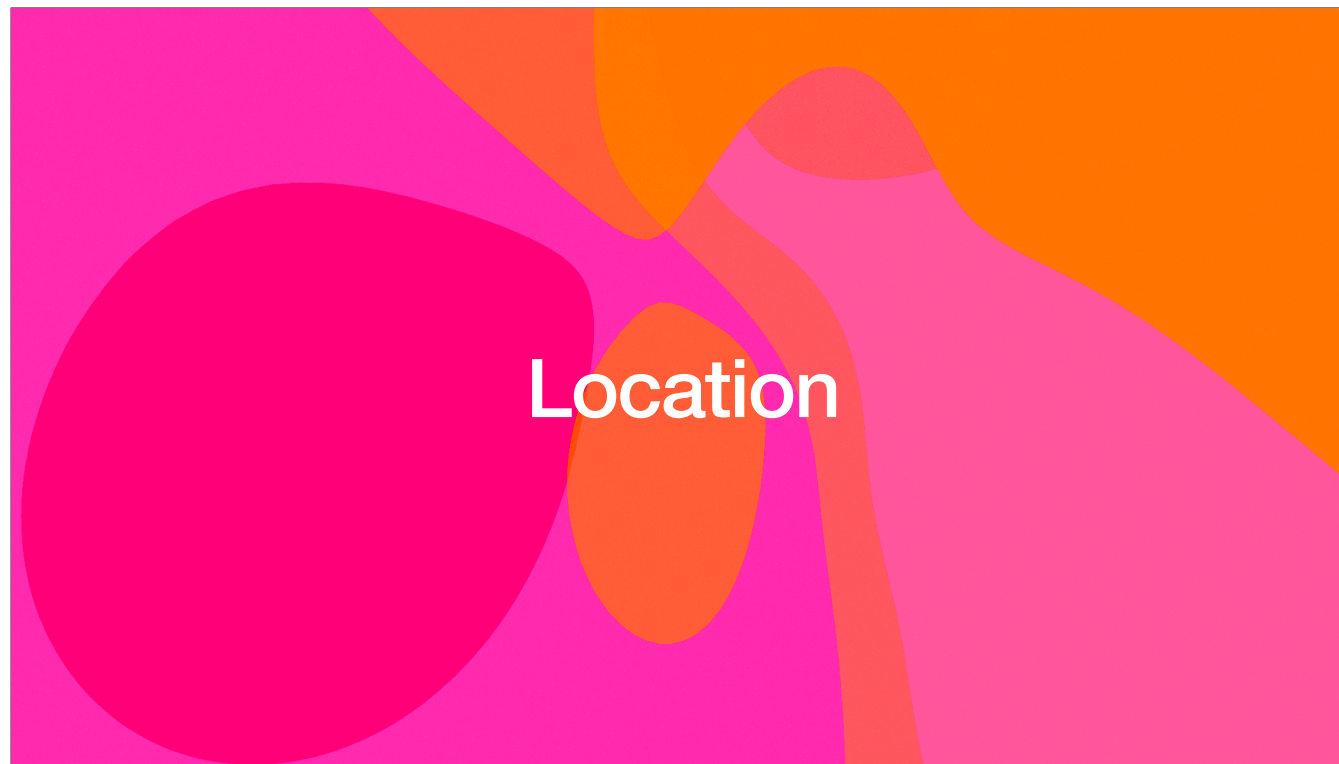
“Only men applied.”

I hear this a lot. Especially from conference organizers - so kudos to mat and the team here for actively reaching out to people that frankly don't look like me. We've already looked at ways of making our job ad more inclusive, but it's never going to be perfect. Our job ad isn't going to be seen by every qualified candidate. If you're lucky you'll have a recruiter who is actively seeking out diverse candidates.

Use your network

But in some organizations, you'll have to reach out to your network yourself. And I do not mean that only hiring managers should do this. At Airbnb we ask that all employees reach out to their network to find diverse candidates. Airbnb employees come from all kinds of backgrounds and have all kinds of life experiences, so our networks are varied. It's down to all of us to make our employee base as diverse as possible.

Don't think you have a network? Well, you're sat at a conference if you're here in person. You have a network sitting next to you. Where else might you find a network? Who have you worked with in the past? Have you looked on LinkedIn? There are 65,000 people on the macadmins dot org slack - are you telling me that you do not know any of them? I doubt that very much

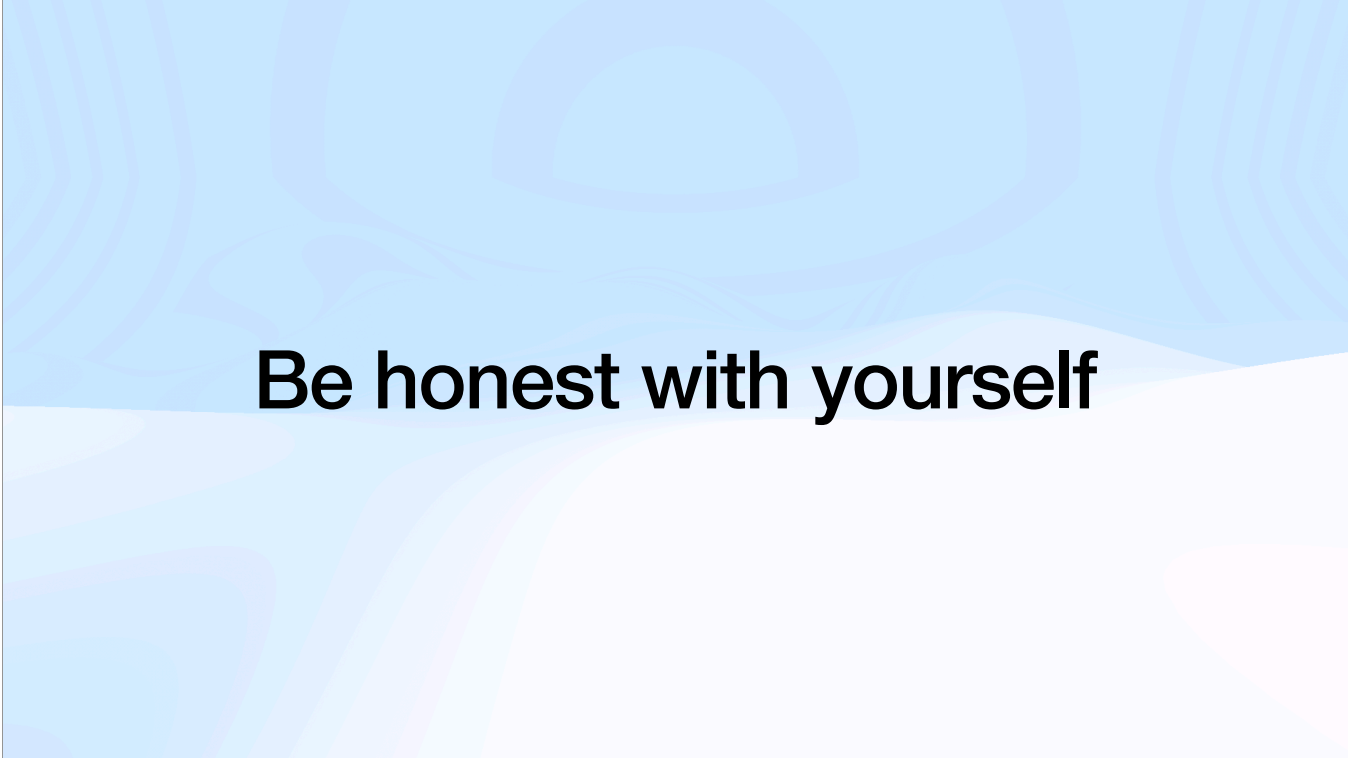


This is one thing that most of us here can't change - and that's an organization's remote work policies.

- Remote work is one of the greatest levelers of our time.
- Is it really necessary for someone to relocate to be in the office? If so, you're limited to people who are able to relocate. This often rules out people with families, those who have to care for others
- Does this role really need to be hybrid or on site 5 days a week? Probably not for folks that aren't climbing under desks to check cables.

The interview

Here we are. You've got a diverse group of hopefully talented people lined up to interview. How should you handle it?



Be honest with yourself

- Be honest with yourself about your must haves vs the things that can be learned on the job
 - For example, to be successful on my team, you need to be able to read and write languages like go, python or swift. If you know one of them, I'm confident someone could pick any of the others up. No need to gatekeep there. But if someone applied who has never written a line of code before, they're going to struggle if they got the spot.

Not everyone has had the same opportunities

Not everyone has had the same learning or career opportunities

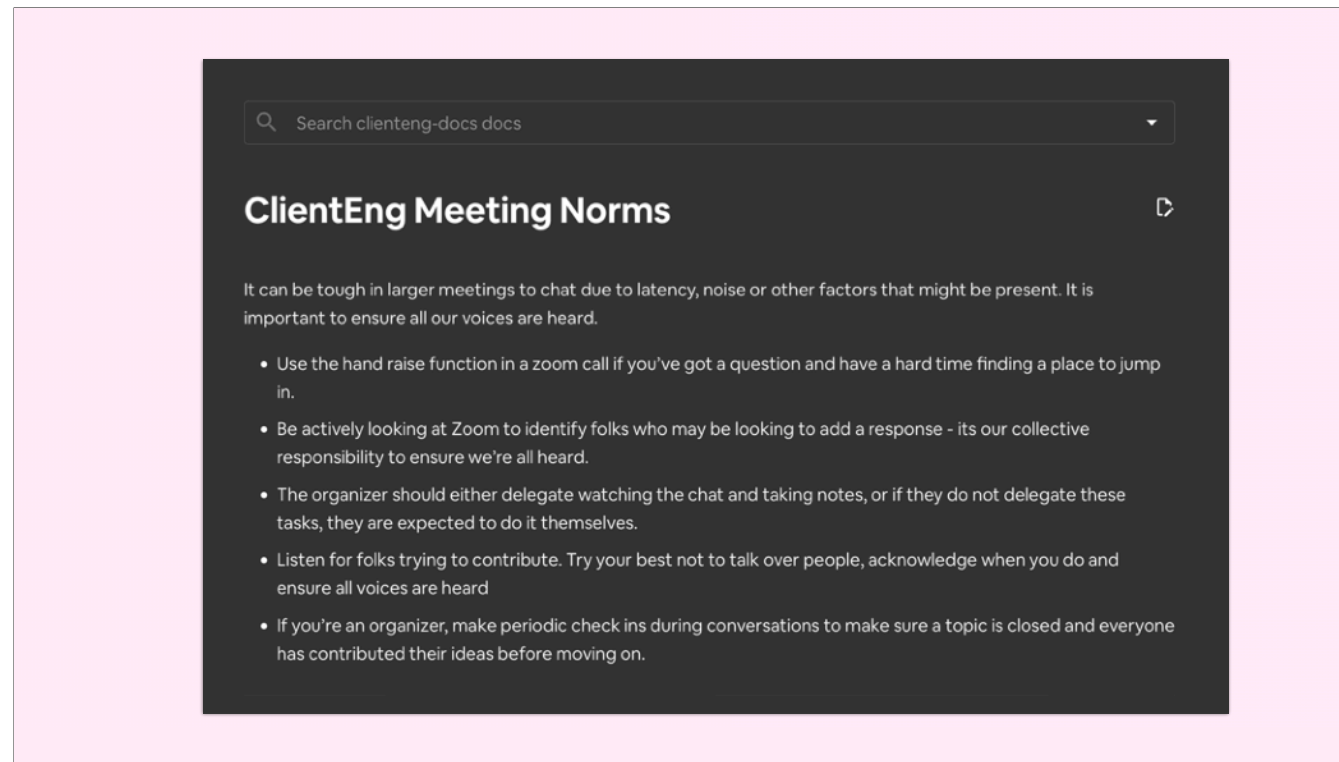
- All MDM's are basically the same for example. If someone has only had the opportunity to use vendor A, should you discount them for not having experience with vendor B's product? Probably not.
- Do not confuse this with giving everyone a pass though - there are lots of technologies that do not need to be learned on the job. A personal alarm bell is when someone tells me that they “want” to learn a programming language. If it's a free language and doesn't require expensive IDEs or whatever, then what is holding the person back in learning it?
- Take into account their personal situation of course, but it is rare that someone has absolutely zero free time in their life where they could have started learning

“You don’t create a culture. Culture happens. It’s the by-product consistent behavior.”

Jason Fried - <https://signalvnoise.com/posts/1022-you-dont-create-a-culture>

So you’ve got a great, diverse team. How do you make sure everyone continues to feel like they belong, like they’re safe? Of course a manager could tell everyone to behave appropriately - but that isn’t really going to do anything. Everyone needs to model the behavior we want.

So how do we model the behavior? Most of the time it just takes a bit of courage. It’s easy to sit there when someone makes a sexist comment in a meeting and say nothing, or talks over someone. It takes a bit of bravery to call out that behavior. But once one person starts, it becomes your culture.



There are other, less scary things you can do as well - actively invite people to participate. If someone has sat there quiet on a meeting, ask them if they have anything to add. This is a screenshot of my team's technical documentation. Right next to how we do sprint planning and what we have to do to onboard a new member of the team, we have how everyone is expected to behave towards each other in meetings. All of these are easy to do, but equally as easy to forget to do. By being a little more intentional with each other during our endless hours on Zoom, we can help everyone feel a bit more included.

Linting

<https://github.com/airbnb/inclusion>

You can even start checking for non-inclusive language in your source code. Phrases like “Dummy” and “master” could easily be replaced with terms such as “placeholder” or “primary” - airbnb has published our configuration for a linter that we have running on every single commit that will hard fail CI if we use those terms.



Mentoring

Mentoring is a great way to help improve the culture of your community. Almost everyone has something to offer in a mentor / mentee relationship.



What is mentorship?

- perhaps you're further along in your career and have some "life lessons" to share
 - Or perhaps the mentee is currently navigating a difficult situation that you can help with
 - maybe you are an expert in go lang and they are stuck on this one part
 - as a mentor you could share your network - if someone is looking for an intro to someone you've worked with before for example

Drumroll please 🥁

Does that sound like something you'd be interested in doing? Think it sounds awesome, but have no idea where to start?



Laura Anthony and myself have created the Mac admins foundation mentorship program. We are launching the pilot phase today and invite people who would like to help us shape the program to join us. It's really early days for this program, so we are looking for people who are willing to put the work in to help us make this an awesome resource, for everyone in our community. We are looking for both mentors and mentees who will be able to pilot the program and provide feedback that will help us scale this out to meet the needs of the whole Mac admins community. If you would like to get involved, you can either speak to me if you're here in person, or head over to macadmins.org where hopefully by the time I'm giving this talk there is some more information about what we are starting



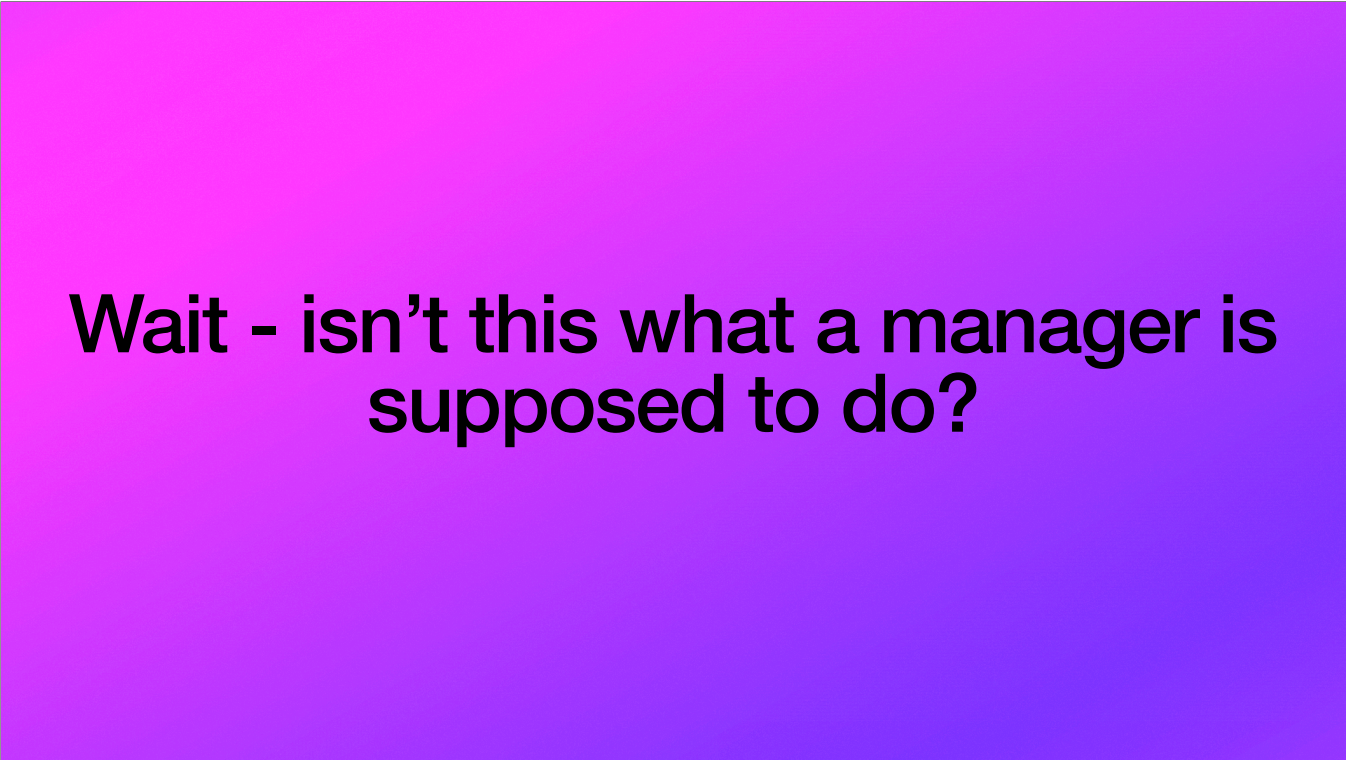
Sponsorship

So that's mentorship. Next we have it's sibling, sponsorship



Sponsorship is when you use your authority or seniority to advocate for someone else. Some examples may be

- Inviting them to meetings they wouldn't usually be a part of - lets say you're in a leadership meeting or one for senior engineers, invite the person you're sponsoring to be a part of them occasionally
- Advocating for their work and potential in meetings - when you're in a meeting and you're deciding who is going to do the project, advocate for the person you're sponsoring to be a part of it, or if they're ready to make the jump, to lead the project.
- Helping them make connections - it's one thing to say "you should go an talk to this very important director about something" to someone who has never spoken to them, vs saying to said director "this person is awesome and is ready to do more work with us, I would love it if you could make time to chat with them"



Wait - isn't this what a manager is supposed to do?

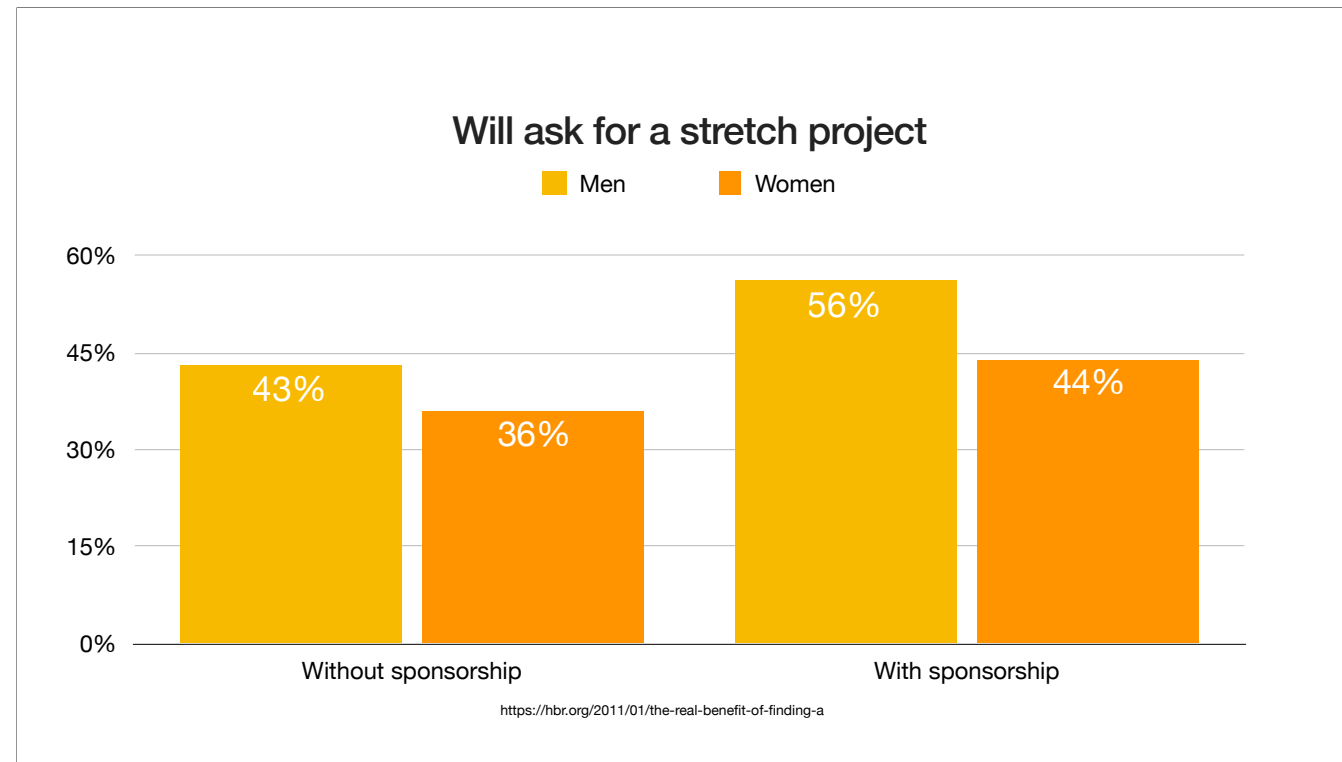
You would be right if all of that sounds like what a manager is supposed to do anyway. But sponsorship doesn't need to be a manager to IC relationship. You can be a sponsor without being a manager. You can sponsor someone who isn't in your reporting chain.

And there are going to be people who are naturally disadvantaged in this area.

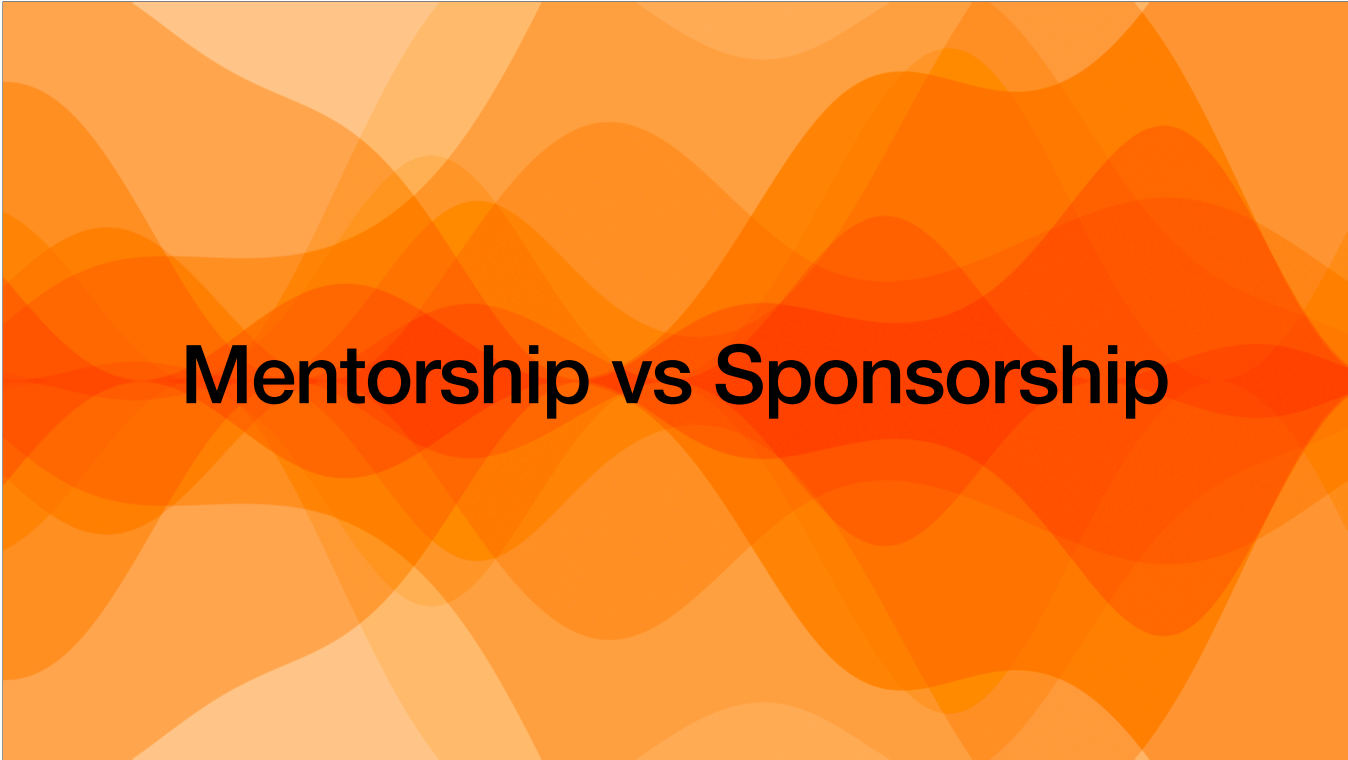
Men are **46%** more likely to have a sponsor than women

<https://www.forbes.com/sites/bonniemarcus/2015/04/06/why-having-a-sponsor-is-important-for-women-and-how-to-get-one>
<https://coqual.org/reports/the-power-of-the-purse-engaging-women-decision-makers-for-healthy-outcomes/>

If you are a woman, you are half as likely to have a sponsor than if you are a man. That's an astounding difference. As a counter point, a study by Coqual has found that women who have a sponsor are 22% **more** likely to ask for a stretch goal or a promotion



To further demonstrate how powerful sponsorship can be, this is how many of these two groups would ask for a stretch project with and without sponsorship.



Mentorship vs Sponsorship

So we've spoken about mentorship, and how you should absolutely get involved with the Mac admins foundation mentorship program, and about sponsorship. On the face of it, they look like really similar things. But they're really quite different.



Mentorship is free

Mentorship is free to give out. And of course I don't mean money here, I mean that you do not need to spend any social or political capital. Let's take the example of a project. Mentorship is when you suggest that they go to their boss and ask for the project. You may be giving them tips or whatever to help them get the project, but ultimately you aren't really involved in getting the person you are mentoring the project. Sponsorship is when you are sat in a meeting and say "I think this person is really good and should be leading this project" - it's putting your reputation on the line for this person you are recommending.

Mentorship < Sponsorship

Do not get me wrong here - mentorship is great, and vital. But you can really make the difference by sponsoring groups of people that need your help.

Recap

- Anyone can help make their community more diverse
- Actively include other groups
- Use your influence
- Join the MAF Mentorship program!

- You don't need to be a people manager to make your community more diverse. You don't even need to do it at work if that's not possible. We're all part of the Mac admins community, there are so many opportunities for you to help make our community better.
- Diverse groups often won't volunteer or speak up - it is up to you to reach out to them when recruiting, to actively ask them for their opinion in meetings
- Use your influence to help others. Sponsor people, advocate for their work. Your voice carries weight, use that to help others
- And finally, please please please join the Mac admins foundation mentorship program. This is a real way you can help underrepresented groups in our community,

Thank you!

grahamgilbert.com

graham.at/movember

[@grahamgilbert@mastodon.social](https://mstdn.social/@grahamgilbert)

graham.gilbert@airbnb.com

We're hiring: graham.at/cpe2024

So that's it - you can find me on these places - I have a rarely updated website, I very occasionally post on mastodon and you can email me at my very cryptic and hard to guess email address. And if you found this talk useful in any way, please consider donating to the Movember foundation and help save some lives of people you might very well be sitting next to.

And if working somewhere that promotes values like this, along with working on some really interesting problems, we are hiring

And now we can take some questions