# Trust, Growth, Inclusion: A Study of Women Engineers' Job-Search Priorities

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# Introduction

In May 2019, Automattic's Developer Hiring Experience team launched a user research study to better understand how our approach to hiring resonates with women and non-binary folks who are experienced developers. We asked participants questions about their vision for their careers and next opportunities, as well as about their reactions to our job postings. It's easy to find advice on this topic, but the volume is overwhelming and the information is often inconclusive. We wanted to cut through the Think Piece noise and to make changes based on actual data. Our goal is to identify ways to increase gender representation on Automattic's engineering teams.

This was a fascinating process, and we are truly grateful to the 71 people who responded to our request for feedback. While much of what we learned lines up with available research, listening to people share their individual stories had a profound impact on us as interviewers. It also revealed further insights that we are eager to apply. Automattic's Developer Hiring Experience team has been able to implement some immediate changes, but we have much more to think about, and expect our findings to influence our ongoing efforts.

In alignment with Automattic's commitment to open sourcing, we are sharing what we found so others -- companies, hiring managers, job applicants -- can learn alongside us and create change wherever they are.

**Important Note:**

As you read through this work, whether or not you are a woman in tech, we encourage you to think about what surprised you the most, what resonated with you, what ideas came to mind for your own company, and what you can do to help.

Ultimately, while a detailed report is valuable in itself, we would love this research to become an invitation for dialogue and a catalyst for action.

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# Key Findings

- Senior-level women engineers rely on personal networks to find jobs and career support. Generally speaking, this personal network exists outside of their current company/role.

- The best hiring processes were ones that were collaborative and responsive, and stretched job searchers' abilities. These processes created a feeling of "eustress" (good stress) that our respondents appreciated.

- Senior-level women engineers are seeking out career growth in the form of challenges and leadership opportunities. They leave when they can't find these in their current roles. As a result, titles matter to them when they look at job ads.

- Senior-level women engineers look for red flags more than green flags when applying to new jobs, and they conduct extensive research on prospective employers if they don't already have a personal connection at the company they're considering.

- Senior-level women engineers feel pulled between pursuing management or deepening their technical ability. Deciding which path to take is difficult -- not in the least because they feel compelled to invest extra time outside of normal work hours just to stay relevant in either track.

- It's very important for women job searchers to know what the hiring process looks like when they are applying because of non-work-related commitments many have.

For more context and insights, please read on or jump to page 11.

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# Methodology

**Overview**

We approached this as a user-research initiative with a vetting process, interviews, a standardized script, and a robust analytical approach. To start, we created an initial plan that evolved as the scope of the work expanded and as we gathered additional best practices for user research. We proceeded to update this plan on a weekly basis in light of changes and roadblocks we encountered along the way.

**Outreach**

We conducted outreach mainly through a blog post shared on Twitter and through our company's social channels. We initially kicked off outreach on May 15, but quickly had to shut down the form five days later, on May 20, after receiving a flood of responses -- 71, to be precise. We reached this decision in consultation with user-research experts who indicated that we had collected enough responses from the audience we were focused on.

**Vetting for Interviews**

With 71 responses, we knew we had to further refine the scope of our study, as we had capacity for 10-15 interviews. To this end, we set up a vetting and interview process for those we wanted to speak with further. We prioritized specifically people with leadership experience, recent job search experience, and higher number of years of overall work experience. Throughout this vetting process, we made sure to prioritize location diversity to get a wider set of global perspectives.

**Interviews**

The team scheduled interviews via Calendly, and each featured two people: an interviewer and a notetaker. We created a script that interviewers followed to make the entire process easier and as standardized as possible. Our team of user researchers guided us as we created the script, and reviewed its final iteration. We then completed a total of 14 interviews, a number at the top end of our desired range.

**Follow-up Survey**

While we couldn't conduct in-depth interviews with all our respondents, we still sought further information from them in a follow-up survey. Of the 50 or so people we emailed, 50 percent completed our follow-up survey. We included these results in our analysis where appropriate.

**Analysis**

We leaned heavily on user-research experts within Automattic at each stage of this work. We listened to their insight on best practices before creating our own comparable system for analyzing results. This resulted in the following process:

- Deciding upon themes that aligned with the initial script.

- Having a team member use those themes to pull out insights in an initial pass through all the interviews.

- Having a second team member review each interview and incorporate any further insights into the findings.

- Using a tool called Delve to comb through all interviews programmatically, looking for key phrases that could provide further insights we might have missed in our manual reviews.

- Taking those insights to write a deeper analysis of each theme including relevant quotes/notes.

This resulted in 56 pages of highlights which our team went through to pull more information from. Those insights along with the results from the follow-up survey for folks we didn't interview are included in the overall analysis.

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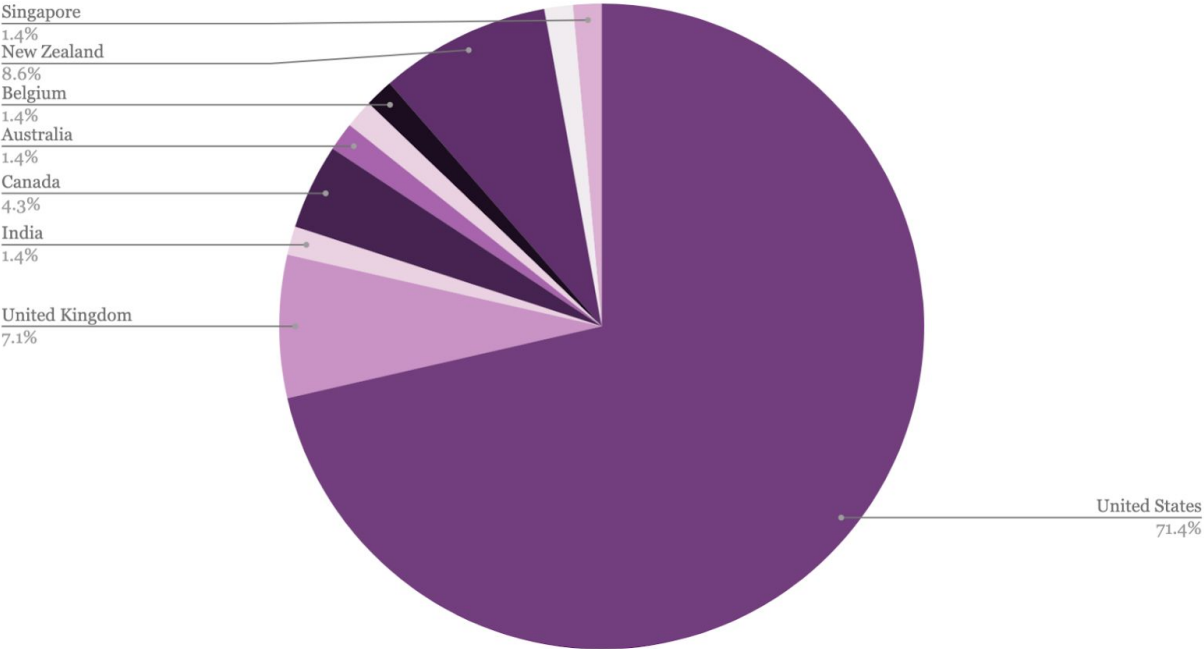# About Our Participants

**Important Note:**

Our participant pool includes two groups of people: folks who responded to our pre-screen form indicating they were interested in being interviewed, and those we actually interviewed from that initial, larger group. The breakdown looks like this:

- We received 71 responses to our pre-screen form, indicating interest in being interviewed.

- We conducted one-hour interviews with 14 people.

- We sent a follow-up survey to the remaining respondents whom we did not interview, of which 24 returned a completed survey.
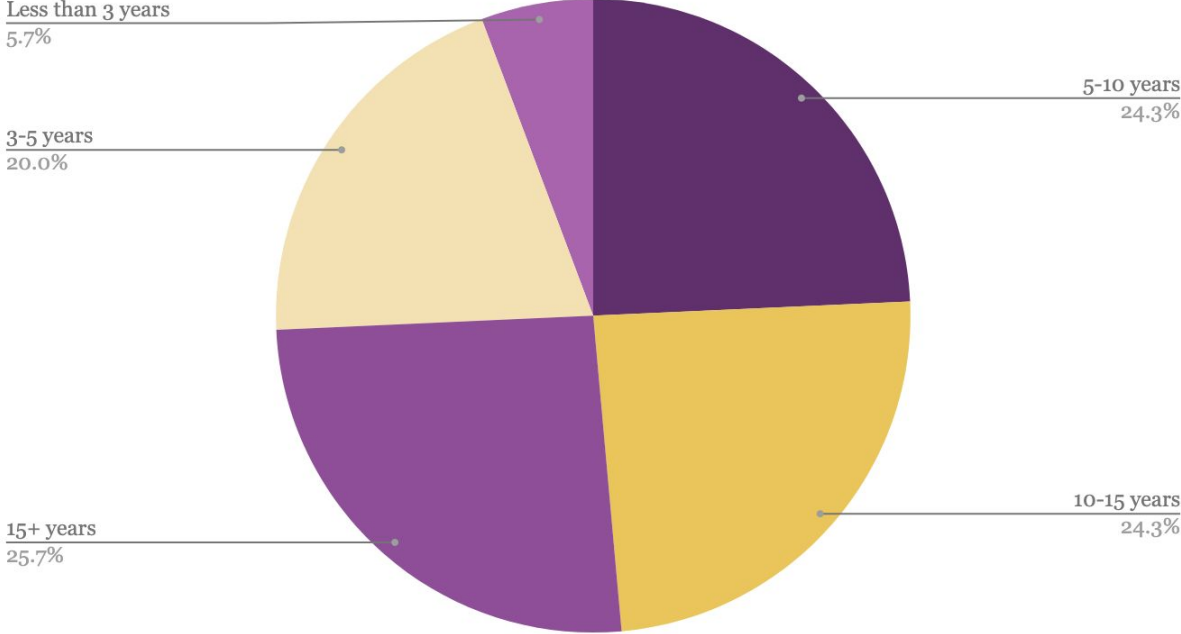
**All Participants**

Our participants come from 10 countries, with 71.4 percent coming from the US. To the best of our knowledge, they learned about our study from Cate's blog post and through Automattic's social media push. 62.9 percent of respondents had looked for a job in the last year; this enabled us to glean rich insights into their job-finding approach, the reasons behind their search, the role their personal networks played, etc.
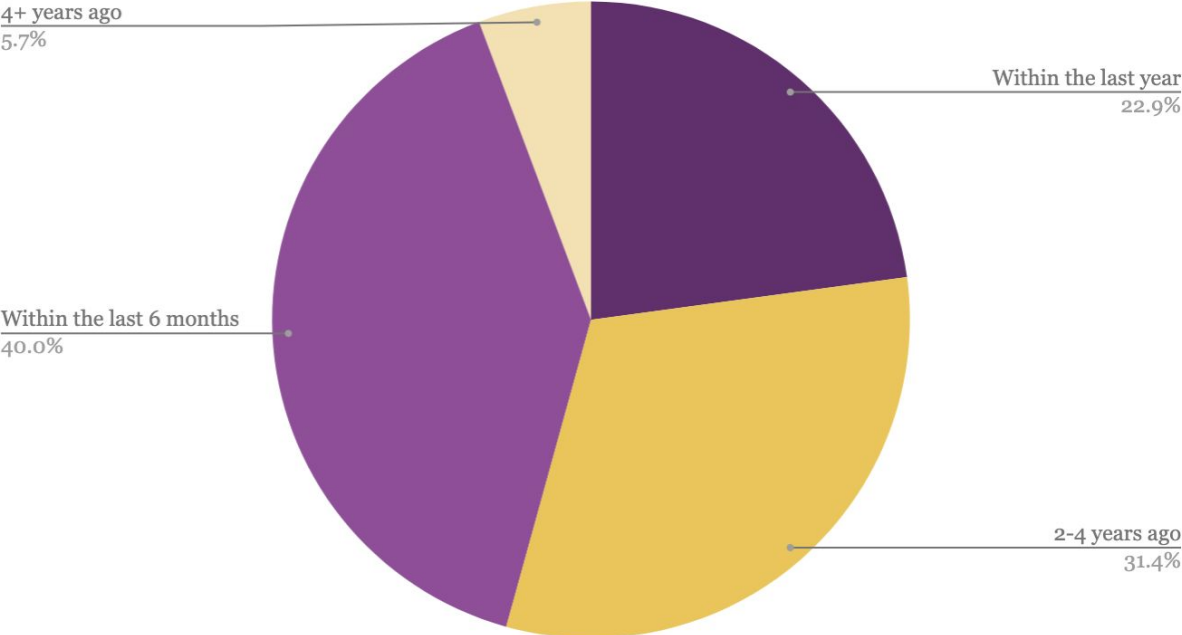
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## Country of Residence

Singapore
1.4%
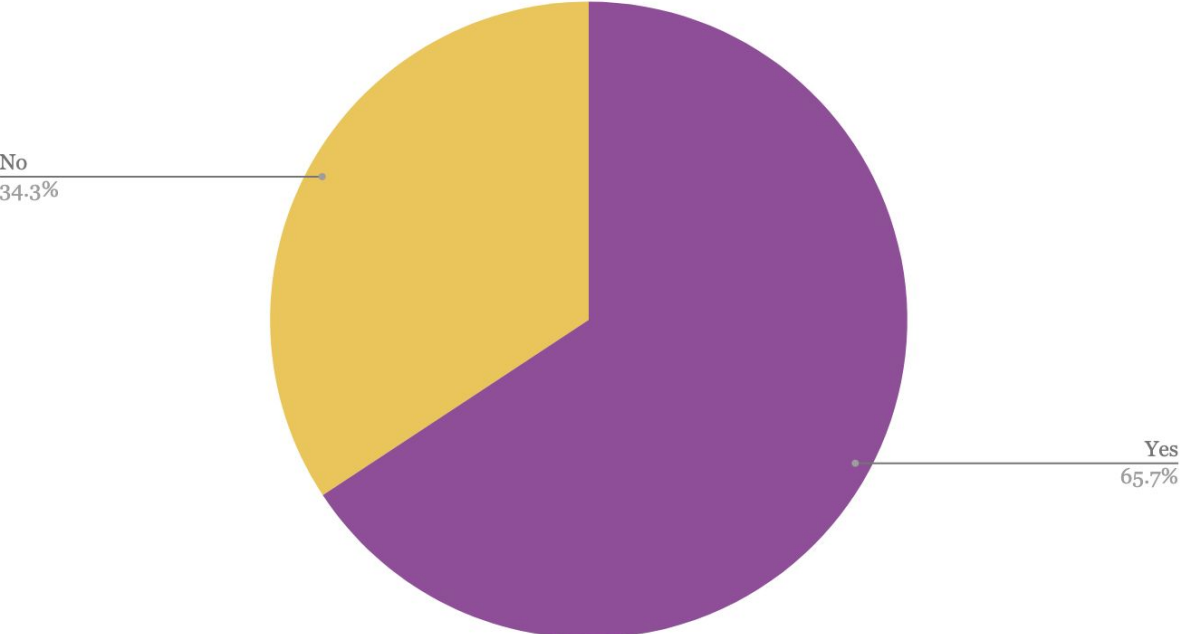
New Zealand
8.6%

Belgium
1.4%

Australia
1.4%

Canada
4.3%

India
1.4%

United Kingdom
7.1%

United States
71.4%

## Years of Experience

Less than 3 years
5.7%

3-5 years
20.0%

15+ years
25.7%

5-10 years
24.3%

10-15 years
24.3%

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## Last time responder looked for a new job



4+ years ago
5.7%

Within the last year
22.9%

Within the last 6 months
40.0%

2-4 years ago
31.4%

## Responders with Leadership Experience (Y/N)
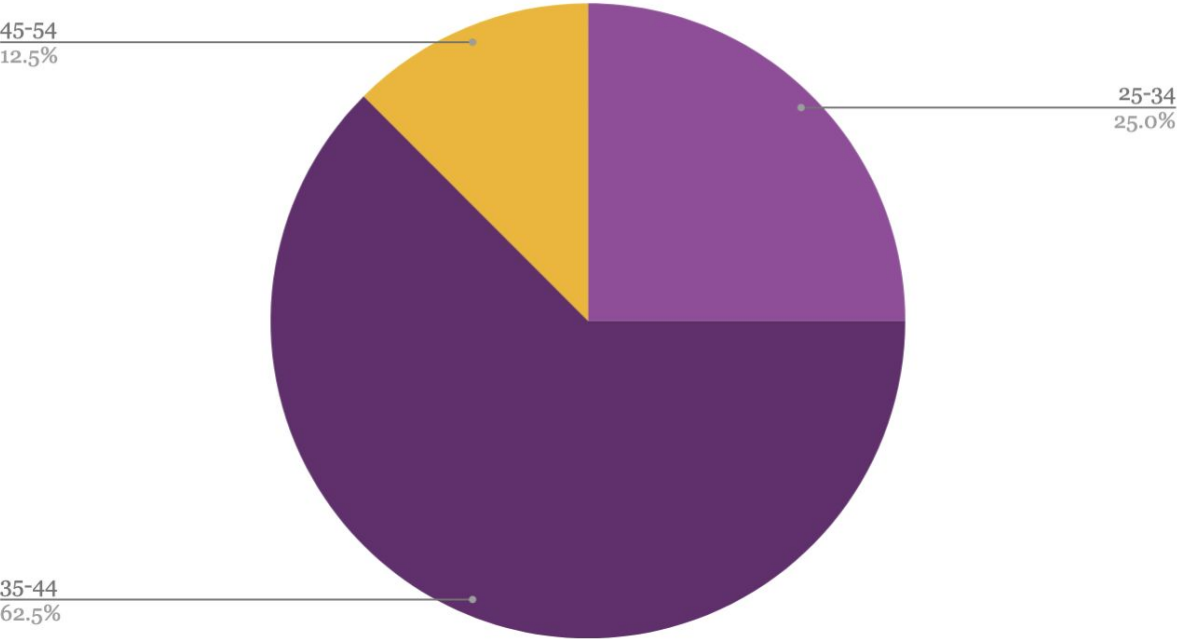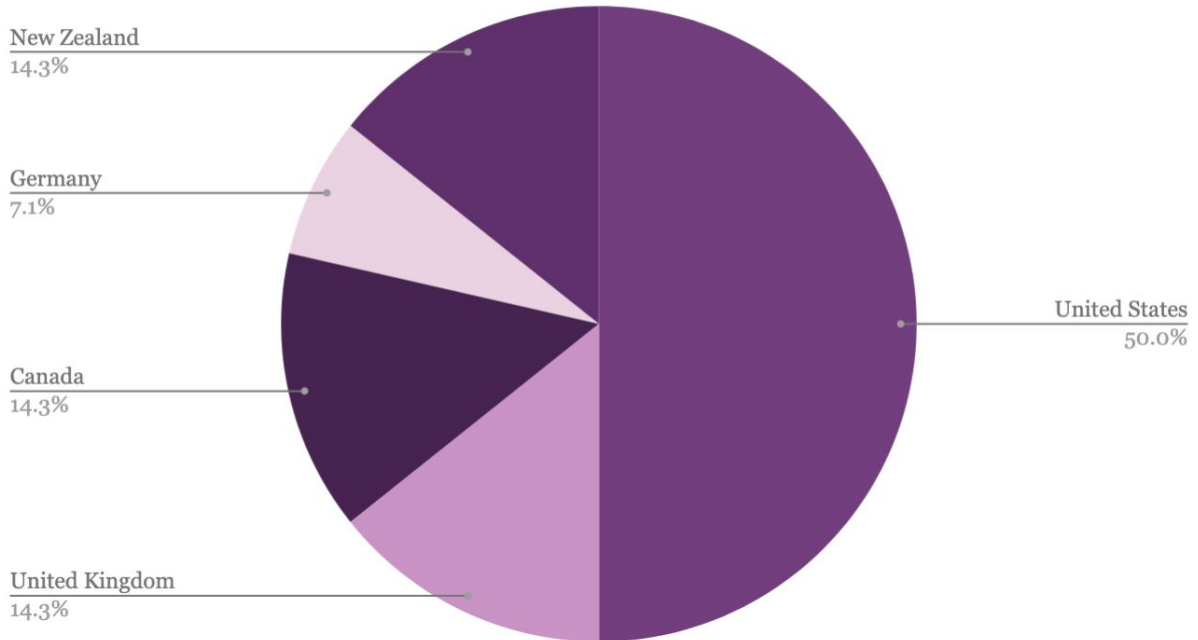


No
34.3%

Yes
65.7%

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**Interviewees**

When looking at the smaller group of respondents with whom we've conducted in-depth interviews, there's a heavy slant towards folks with leadership experience, recent job-search experience, and a longer professional experience. During the vetting process, we were conscious of being location-inclusive, which is why we see a dip from 70.2 percent of US respondents to 50 percent of US interviewees. We did not speak to anyone with less than five years of experience; most folks we spoke to had at least 10 years of experience.

## Interviewees Age Range

45-54
12.5%

25-34
25.0%

35-44
62.5%

## Interviewee Country of Residence

New Zealand
14.3%

Germany
7.1%

Canada
14.3%

United Kingdom
14.3%

United States
50.0%

## Last time interviewee looked for a new job

Within the last year
28.6%

Within the last 6 mont...
57.1%

2-4 years ago
14.3%

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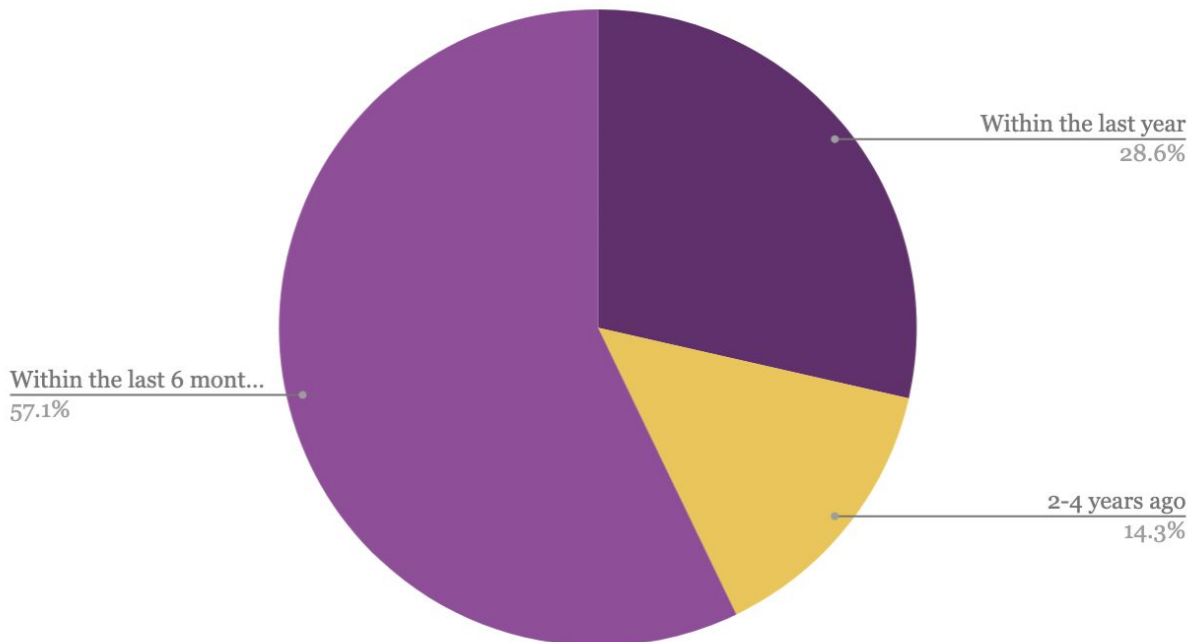
# Interviewee Years of Experience

15+ years
35.7%

5-10 years
35.7%

10-15 years
28.6%
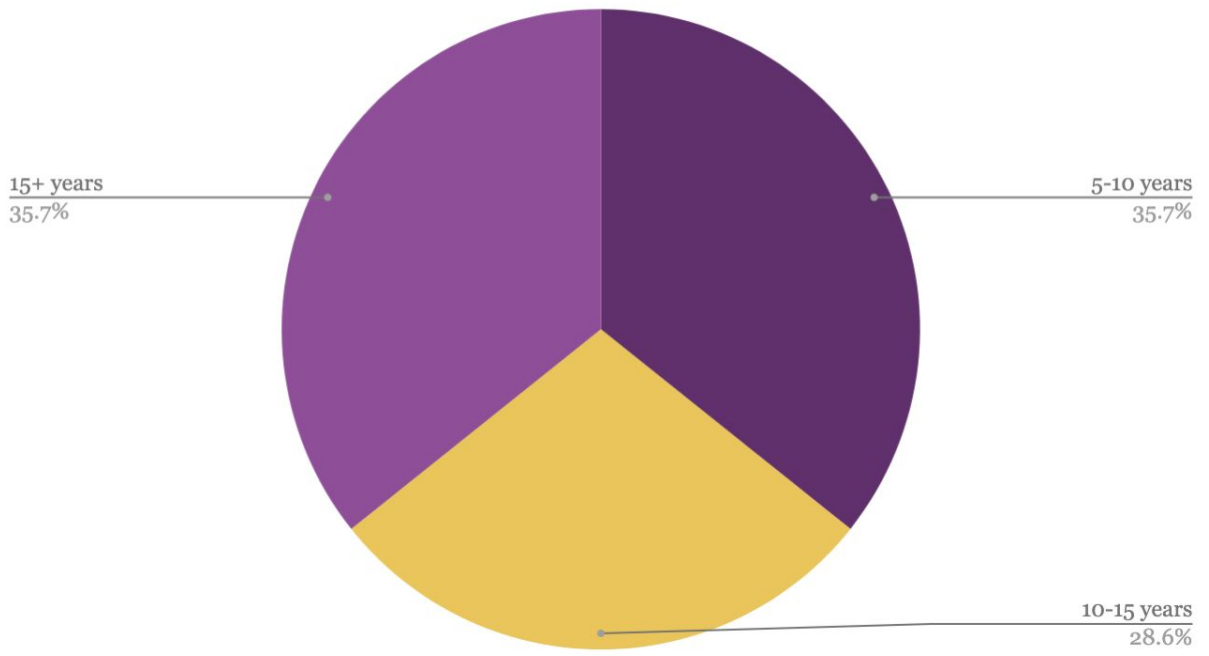
# Interviewees with Leadership Experience (Y/N)

No
21.4%

Yes
78.6%

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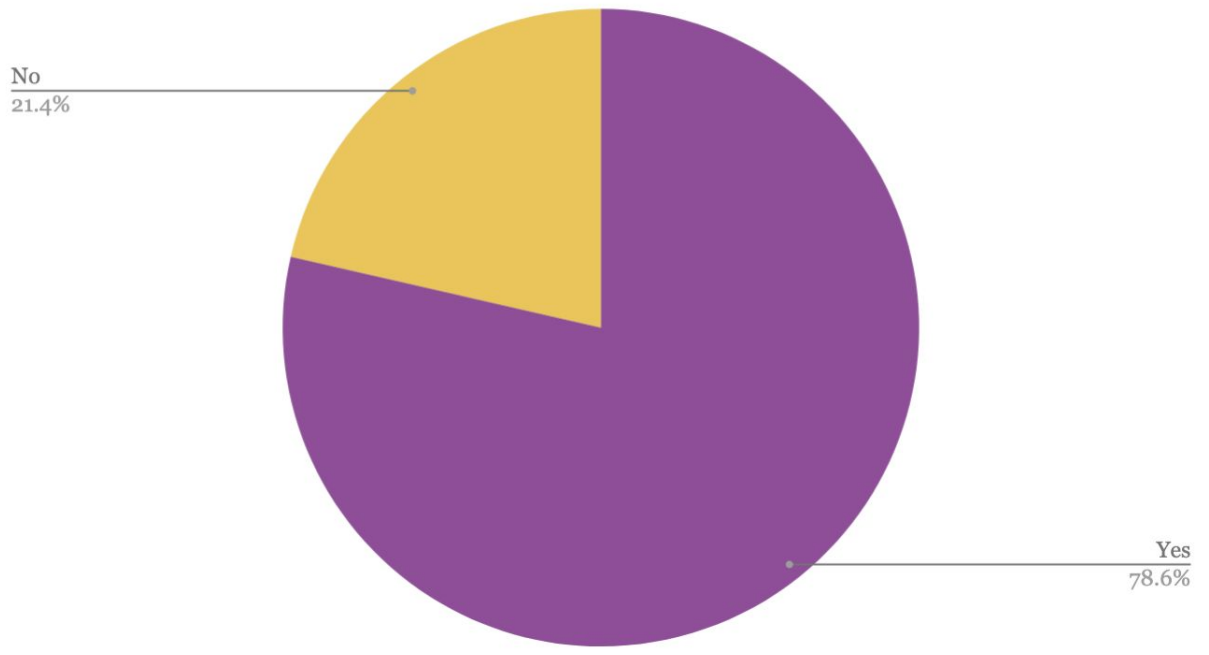
# Overall Findings

Each section below represents a common theme that we distilled from the interviews we conducted. Each subsection explores that theme in greater detail.

## Finding and Applying to Jobs

### Job searchers focus on red flags in job descriptions

Rather than looking for green flags to go ahead and apply for a job, many respondents shared that they spend more time looking for an absence of glaring red flags. The quotes below encapsulate this approach:

*"I look for paternity leave because I think it's important it [raising kids] is shared and not just given to women who are then responsible to take time off."*

*"Even if it is not for me I want to see that a company has good parental leave policies."*

*"But after a certain point of time, you realize that job description is written by someone who doesn't really know technology and doesn't know how to tell you what's happening. So I'll read them, but I only read them to find red flags"*

### Job searchers are often swayed by research

*"I find job ads to a point not super useful. I'll generally do research and that will sway things."*

From reading about what business cycle a company is in (boom, bust, IPO, funding round, etc) to catching up on any of the latest news for a company, many indicated they do their research first before deciding to apply. This is a symptom of mistrust around job descriptions and how well they reflect a company's authentic culture. In general, Glassdoor was not seen as a useful resource:

*"I sometimes use Glassdoor but I don't find it that useful. It feels like a ton of jaded people who left the company or had a bad interview experience."*

Where a personal connection was lacking, their own research helped job searchers fill in the blanks before applying. One participant in particular mentioned the importance of seeing an engineering blog!

**Reliance on and trust in a personal network**

Personal connections to a company greatly increase the chance of applying or investigating an opportunity when the "insider" shares their positive experiences.. Whether through Twitter followers, LinkedIn connections, or Slack groups, a personal connection to a company was repeatedly mentioned as an important factor by many women we interviewed. This held true both for those searching for jobs (active) and those who'd been approached about jobs (passive). If outreach came from someone in their network, particularly another woman, it stood a much higher chance of being taken seriously.

*"As a woman looking for a new job, most of the time when I'm trying to find if somewhere is safe to be, I go through my reference network. That's always my go-to search criteria. If someone I've known has worked here before and I know it's a safe place, that's a much higher-fidelity threshold for me."*

Of the folks we did not interview but surveyed in a follow-up questionnaire, 100 percent answered "yes" to the question, "Do you reach out to your personal network as part of looking for a new job?" This further solidifies our findings on the importance of a personal-network connection for senior women engineers.

**Looking for leadership opportunities**

As senior women in tech grow their expertise, there are less opportunities at their level and they tend to be more competitive. As a result, when women engineers look for new roles, leadership and growth opportunities are high on their priority list. Many also mentioned this as the reason why they left a position in the past – lack of opportunities, being passed up for promotion, or hitting a ceiling. It can act as a draw to a new company, as well as a motivator to leave one's current employer.

*"The higher up you go in tech, the fewer roles there are and the more competitive it becomes."*

**Women engineers are constantly contacted by recruiters, but with generally poor results**

Nearly every single person we spoke to mentioned interactions with recruiters. Most felt put off by the outreach due to the lack of awareness around their role, expertise, and goals. Of the folks we did not interview but surveyed, 79 percent responded "yes" to the question, "Do people reach out to you with personalized opportunities?" which further backs up the level of outreach they experience.

*"Constantly, it's the curse of being a woman in tech and having [A Big Tech Company Name] on your résumé".*

*"I'm fairly reluctant to trust recruiters. They have to do quite a bit to prove themselves."*

*"Developers have people reach out to them all the time. Most recruiters don't do it too well. If someone signals that they are familiar with my work experience I will almost always respond. If it is somebody I know, I will talk to them. Cold contacts are OK but they have to be sincere and with intent and make sense."*

In one case, discussing salary during outreach was a draw:

*"So the recruiter that caught my attention for [COMPANY] started right up front with a salary range. And I found that refreshing. It was nice not to wonder, okay, am I wasting my time talking to someone who can also offer me three quarters of my current salary or if I get to the salary negotiations, am I going to have to negotiate?"*

**It helps to talk with folks at your current company**

A few folks mentioned the power of talking to people currently working at the prospective employer -- even if they had no personal ties beforehand. The more available an option is to chat with someone, particularly if they are in a senior role or one similar to the job searcher's, the bigger impact it has on candidates. It's a strategy we have deployed in the past to draw folks into working at Automattic.

*From notes: In a few cases, the interviewee has spoken with senior men at the company who have not only said the right words but have shown through their actions that this is something they consider important (diversity & inclusion).*

**Why senior women engineers leave their current jobs**

Generally speaking, the women engineers we surveyed or spoke to directly seemed to employ two approaches: always be interviewing, or wait until your current job gets really bad before you decide to leave. Both approaches share a common truth: it's harder for women to look for a new job because of how difficult it is to evaluate the culture at a potential employer and to balance work with family life. As a result, some respondents held on to their jobs in order to keep their skills sharp while regularly interviewing for new positions. Others waited until they absolutely had to make the decision to leave due to a toxic environment or growth constraints in their current role. We observed that the two often go hand in hand.

*"I tend not to leave until I'm really unhappy and usually what makes me really unhappy is when I finally have to admit that there is just no chance of career advancement at the current company."*

*"I'm a big proponent of people just continuously looking because interviewing is a skill, right? And so if you lose that skill or you need to brush up on the skill – you really don't want to have to be dependent upon it when you are desperate."*

## Career Growth

**Seeking to be challenged and having an impact**

Generally speaking, many of the folks we spoke wanted to be continually challenged and to have a role where they could make a real impact in the company -- if not the world at large. This seemed to be a consistent desire, regardless of leadership status.

*"I really like being able to effect change on a larger scale"*

*"If I feel like if in a year, I don't see potential in a place then I'll think about moving on."*

**Lack of leadership opportunities and challenges leads to women leaving**

As mentioned above, a big factor in women choosing to leave companies was finding limited opportunities -- whether through a role change or a switch into leadership. This is a major pain point, as there are fewer roles available the further your career progresses, and the folks who had previously filled them were likely not women. Many women expressed great frustration, confusion, and disappointment around a lack of promotion -- especially when they received no feedback explaining why they had been passed up. This was often the final straw before leaving.

*"On one hand, you don't see many women in senior positions and on the other the CEOs/higher managers are not used to working with women, least of all in the senior positions. I'm not what a senior software engineer looks like to them."*

*From Notes: When this respondent asked for a promotion or role change, she was told she had to wait her turn. She refused to, so she went to [Company Name].*

*"I recently quit my job because I hit a ceiling."*

**Respondents struggle with and are pressured into learning outside of work**

Many women mentioned the struggle to balance learning outside of work as a way to stay relevant. There is a pressure to consistently grow in one's role without an understanding of the pressures women experience through the role of caregiver (for kids, parents, etc.) This feels like a never-ending catch-up for many folks we spoke to, who repeatedly mentioned it as a major pain point -- particularly those women we interviewed who were married, had kids, or were taking care of parents. This is a symptom of the well-documented phenomenon of women around the world bearing the brunt of household work and familial obligations.

*"Because there are so many new things all the time in tech, I feel pressure to spend time outside of work learning new things... I have to do it outside of work to be relevant. "*

*"I am married and eventually want to start a family and have no idea how that will impact my career. I wanted to be established before I do any family planning but I'm also getting older. It's really stressful to juggle the two desires."*

*"Right now, it's assumed if I want to learn something I need to do it on my own time. I don't have much of that right now as a married woman with a child."*

**Titles and career progression matter**

When looking for jobs, the folks we spoke to want to be sure that each subsequent role they take looks and feels like a progression in their career. There was great fear in taking a side-step -- let alone a step back. This is a common finding among underrepresented groups.

*"My next job hunt will be for a more appropriate title. I saw a great thread on Twitter about how underrepresented groups rely more on titles to prove worth in a group"*

*From Notes: The respondent would like to see more structure – all developers have one of two titles, and she appreciates something akin to a ladder. It is important to her because she'd like her résumé to reflect progression.*

**There's a real struggle between seeking management roles and deepening one's technical skills**

Nearly 70 percent of our respondents had leadership experience, so this group was deeply familiar with management work. They often spoke about it as a crossroads: they acknowledged their aptitude for management but feared it would require a step backwards in their technical abilities and how peers would view their technical prowess.

*"The one thing in the last two years of being an engineering manager that I have been struggling with (I think everyone has this talk with themselves) – I don't ever want to feel like I'm not technical enough but I do want to feel like I'm leading more."*

*From Notes: The main risk this respondent saw is that in engineering management, there are fewer positions at her level, and they're open less often.*

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*"I didn't feel that even though I had done a lot of development as a contractor, I had never interviewed as an engineer. This made me nervous that I wouldn't pass a technical interview so I decided to go back to management."*

**Being seen as successful and feeling successful**

A few women we spoke to touched on their desire to feel secure, stable, and successful in their careers so that changing jobs didn't feel so arduous. There's a constant feeling of needing to prove and re-prove oneself with each additional job change -- this ties into the phenomenon of women who wait until their work life is *really* bad before they decide to leave.

*"I want to get to a place in my career where I have enough reputation and credit that it doesn't feel like going through a meat grinder to change jobs or direction."*

**It's tough to strike a balance on your résumé between changing jobs enough, but not too much**

Many folks we spoke to were aware of a strong tension between the need to show progression, and the competing need to demonstrate stability. Add in toxic cultures and situations where women sometimes need to leave a job abruptly, and it becomes very tricky to figure out a "just right" approach to changing jobs. This is a risk/reward battle our respondents seemed to constantly navigate in their careers -- should they, for example, leave a toxic situation with a harasser, or will that harm their career prospects in the future?

*"I'm more likely to transfer internally."*

*"It's not great to be jumpy on your résumé but some situations you just need to get out."*

*"The impression I'm getting as I've been interviewing (in the last interview) is that when I talked about my experiences one of the things that came up was "oh, at the same place as your last job". In the startup world, it's almost as if they expect you to have had multiple jobs. To be honest, I was really happy and comfortable growing at my job and it's really hard to tell me to take a risk somewhere else when the culture*

*could be awful. That could have way more ramifications for me than a stereotypical white dude looking for a job."*

# Support System

**Women engineers' support systems are mainly outside of work**

With so few women at their level and in tech in general, our respondents' support system mainly exists outside of their work environment. Most of their connections and networking take place outside of their company, which can later help them find jobs and create new connections.

**Networks matter immensely for finding jobs**

As mentioned above, when it comes to finding jobs, one's network and support system make a huge difference. The direct connection gives weight and context to an otherwise nameless/faceless company. As a result, building and maintaining this network remains a priority for the people we talked to.

*"Rebuilding my professional network in a new city is also a focus. It's a big and daunting task."*

*From Notes: One thing this respondent has noticed is that neither in-person nor online communities are ideal. It's much easier to get past general topics and talk about something relevant and concrete in person But in-person is expensive in terms of time and energy.*

**Desire for more community-based, senior-level opportunities**

Within communities built for connecting women in tech, a few folks mentioned a desire to have more senior-level opportunities compared to the currently available early-to-mid-level folks. This ties into the power of connections to senior women and to moving jobs as well.

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*"The moral support makes me feel better within community but I'd appreciate being able to network with other women or being able to connect with other senior women professionally."*

## There's a need for more technical discussions in women-in-tech communities

The reality of being a woman online dealing with the risk of potential harassment bleeds into professional forums, where sharing work can often open the door to trolls and bullies. Using existing women-in-tech spaces with built-in psychological safety to discuss more technical topics is something senior women engineers would like to see more of.

*"It's not that I don't feel welcome; there's just a risk/reward situation. Putting yourself out in a forum is a risk personally and professionally. I haven't felt a need to engage in any of that and have grown my career without dealing with that. I'd rather not be trolled into something bad. Or give a tech talk and then have a lot of bad press after or have to deal with people who don't understand "no". I wish I had access to more technical group without those risks."*

# Hiring Process

### Setting expectations matters

Whether it's salary, an explanation of the hiring process, or clarity on the team someone might join if they get the job, setting expectations repeatedly came up as a very big positive and as an aspect for companies to get right when reaching out to senior women in engineering. The more information companies shared ahead of time, the more engaged in the process women felt and the more personalized the experience was. This came up often in our interviews -- in particular when we asked about the best job interview experience our interviewees had ever had.

*(When talking about best recent interview) "They sent me my schedule ahead of time and let me know what to expect."*

*"One thing missing which would be nice is, which I've seen on other websites, is what you can expect from the process – like when you send this, you can expect x, then you*

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*know, we'll reply to you within this amount of time and then the next steps would be this, this, and this, and here's a web page that shows you like those steps laid out. The reason I say that is because nowadays it kind of feels like your CV or your résumé just goes into a void and you don't know where you're at. It just seems very one-sided. I'd want to know what's the normal process to expect."*

*"I'm not big on 'just apply, we'll put you on a team.' I want to have a good idea of the people I'm going to be working with day-to-day. "*

**Responsiveness throughout the process is key**

Many women mentioned the crushing disappointment, confusion, and frustration with slow hiring processes with poor responsiveness. Given how much company research women do and the higher risk involved in leaving their current role, this likely adds to the disappointment when a company turns out not to treat them well.

*"The follow-up in a funnel is really bad – that sucks. That's more of the worst things I've felt."*

**Women need to be involved in the hiring process**

Women look for other women in a hiring process. Numerous respondents brought this up as a key determining factor. Many of the women we spoke to had experienced being "the only woman" and, at this point in their careers, they no longer want this to be their reality.

*From Notes: She judges companies very much on whether there's any women who get to have a say in hiring. "So over being the only woman engineer."*

*"It's important to see at least one woman in the interview process."*

*From Notes: [COMPANY NAME] arranged for this respondent to have coffee with their engineering director (a woman), which was a big motivator.*

**Many seek an interview process that allows for "eustress" and collaboration**

Eustress is defined by Wikipedia as "the positive cognitive response to stress that is healthy, or gives one a feeling of fulfilment or other positive feelings… Eustress occurs when the gap between what one has and what one wants is slightly pushed, but not overwhelmed. The goal is not too far out of reach but is still slightly more than one can handle. This fosters challenge and motivation since the goal is in sight." Hiring processes that helped create this feeling and had the right amount of stretching for folks proved to stand out as particularly great ones. Relatedly, interviews that were more collaborative felt far more human-centered.

*"At the end of it, I felt really excited. I felt that the interview had stretched me and I wasn't sure if I would get the job. I felt like the experience was very positive-stressful as opposed to anxiety-stressful."*

*"As an interviewee, it feels less like getting pinned in a corner or getting stuck but like being given footholes to show what you can do and show where your edges are."*

*"The attitude that everyone had going into the interviews wasn't 'there's a right answer' but more 'let's sit together and solve a problem'. Felt more like collaboration rather than a test."*

From time to time, we do hear from applicants about how the code test/trial helped them learn something new and that it was an enjoyable experience. This is the kind of experience we should be aiming for.

**The worst interviews involve poor responsiveness, feel like traps, and lack a human touch**

The hiring processes that left our respondents with a bad taste mainly revolved around three factors: poor responsiveness, poor treatment of candidates, and being asked to complete tasks that felt like a trap (for example: interviews that include "impossible problems" to solve). Responsiveness proved to be a big red flag when companies couldn't get it right on the most basic level.

*"Don't leave your candidates hanging. With [Big Tech Company] I ended up waiting over a week after my interview. I know they are super busy, but even a check-in every*

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*2-3 days if you want the person to work there would be great. It's not nice to leave people hanging."*

*"He wanted three hours of my time, which is kind of a lot."*

*From Notes: This developer's worst interview was with [Big Tech Company], a five-part interview that was all algorithm questions – she viewed this as a "five-part trivia contest."*

Of note, many women shared stories with us that didn't quite match a common theme but that touched on a more general lack of humanity. This was hard to categorize, but is worth noting regardless. For example:

*"The interview was not far from a shouting match."*

# Conclusion

Thank you to everyone who took part in this work and whose insights are inspiring us to create change within Automattic's Developer Hiring Experience team. Actions speak louder than words, though. To that end, you can read more about the actions we have taken and what we are considering going forward coming out of this work here. As our Creed states, "I am in a marathon, not a sprint" -- we have much more to do and we hope you'll join us.

**Some of the actions we've taken:**

- We rewrote our job postings: instead of focusing on our needs, we now highlight the learning and career opportunities we offer to the candidate.
- We removed all the little games from our job posting page. We were trying to test people's attention to the job posting and filter out unmotivated candidates; it turned out we were also putting people off who we want to apply.
- Candidates' existing work and life commitments make it important to know the details of the hiring process at the outset, so we have created a public page that clearly outlines our hiring process and gives people a concrete understanding of the expectations. We've also put together a more detailed document about what

to expect during interviews, and will be creating similar materials for the other phases of our process.
- We have started offering candidates the opportunity for one-on-one calls with a member of our Developer Experience team during the final stage of our hiring process; we're starting with under-indexed folks, with a view to rolling this out to everyone.

**Actions we recommend you consider:**

- Examine the level of information you share about your hiring process. Can you provide more information to candidates ahead of time? Does what you share match your current process? What can you do to demystify what your process entails?
- Look for opportunities to provide more one-to-one connections with candidates early in your process, particularly those from under-represented groups. This can have a great impact on candidates and allow them to gain necessary insight into your company.
- Clearly explain the pathways for realistic growth and development in the organization in your job postings. This allows applicants to better understand whether the opportunity you're providing will accelerate or stifle their growth.

*This project was a team effort from Diana Kalkoul, Toby Nieboer, Rebecca Williams, Anna Holland-Smith, and Cate Huston, led and coordinated by Anne McCarthy.*

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