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2021

# TECHNICAL EQUITY EXPERIENCE SURVEY

The Field of Technology Continues to Fail Women, Non-binary People:
Experiences and Impacts Worst When Viewed Intersectionally

# MESSAGE FROM OUR COO

How are you doing? It is a question so often asked we have become insensitive to its importance. It is used as everything from an offhanded greeting to a daytime tv catch phrase. If you are like me, its absent-minded response frequently comes from the cultural reply trove used in your family: "Fair-to-middling," "Reasonable," "Can't complain," "Tolerably well." Too often our comeback neither acknowledges the gravity of the question nor the criticality of the feedback enveloped in a considered response.
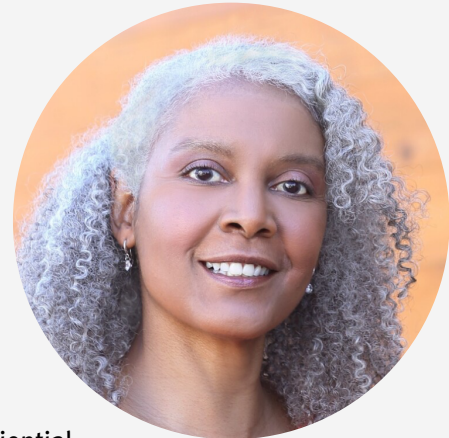
As women and non-binary technologists, our considered, authentic responses rely heavily on our experiences. Viewed through our experiential lenses, we would have to admit that we absolutely can – perhaps must – complain. Our intersectional experiences in tech are neither reasonable nor tolerable, and fair-to middling is absolutely not good enough.

We are wearied by the discrimination and harassment we ubiquitously experience in our workplaces. We resent that we disproportionately carry the stress of feeling like imposters that do not belong in our own workforce. We are impatient with the pace of change at a time when the World Economic Forum projects that at current course and speed, it will take 267.6 years to close the economic gender gap.

As technology business leaders, we seek to instill a workplace culture that provides a completely different, inclusive experience; one characterized by equal access to jobs or capital for growing businesses, equal pay, and robust advancement opportunities. We know that this culture we envision is not only healthier for us as workers but more beneficial for our companies. The big question is: "How?"

At AnitaB.org, we believe that we must measure the interpersonal, internal, and professional impacts of what women and non-binary technologists experience to be able to bend the arc of a diverse technology ecosystem towards inclusion. To foster a sense of belonging for all its participants, we must understand how to make the tech ecosystem equitable.

The diva is in the details. As difficult as it is to understand the lived experiences of others, it can seem impossible to even ask the correct questions – or to be transparent in response to the simple question: How are we doing? This report aims to animate the adage that when we know better, we do better.

We challenge ourselves and our peer technologists and leaders to be bold in our actions, empowered by data-centric, experiential yardsticks like this report. Dare to inquire about your workforce's specific experiences and to make necessary policy changes to assure equity. Together, we can change our landscape for good. Collectively, we can all belong.

Lucia Hicks-Williams
Chief Operating Officer

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# INTRODUCTION

Technology has a diversity, equity, and inclusion problem. Not only do women and non-binary technologists face inequities in hiring, pay, and advancement, but they also report a wide range of negative experiences in the tech world. Only one in five women and non-binary technologists currently feel like the tech industry is very or extremely inclusive. While this problem would be pressing in any field, it is particularly urgent in technology—technology touches almost all aspects of our lives, including business, education, healthcare, and governance. A lack of diverse technologists means we have fewer perspectives on what current problems need solving, how to solve those problems, and how to anticipate the problems future technologies might create.

The central finding of the 2021 Technical Equity Experience Survey (TechEES) report is that, since 2019, experiences in tech have gotten worse for all marginalized genders, but are increasingly worse when the data are broken down by intersectional identities. Individual technologists' experiences are not determined by gender alone, but by many other factors, including race, age, disability, LGBTQIA identities, educational background, experience level, and caregiver status.

This report begins by presenting women and non-binary peoples' experiences with others in the tech field. Women and non-binary technologists report a pervasive experience of discrimination and harassment in the field. More than 90.0% of respondents report some form of discrimination, and 100.0% report some form of harassment. Moreover, Black, Latinx, Native American, and Pacific Islander (BLNP) respondents are reporting increased feelings of race-based discrimination and harassment between 2019 and 2021. As long as the tech world tolerates any form of discrimination or harassment, it will have a diversity and inclusion problem.

# INTRODUCTION

The report then considers the impact these negative interpersonal experiences are having on women and non-binary technologists' internal experiences in tech, including their feelings of imposter phenomenon, psychological safety, belonging, and stress. Belonging emerges as a particularly important metric that predicts several professional outcomes, including job satisfaction and retention. It should therefore raise alarm bells that only 63.5% of all women and non-binary technologists report a sense of belonging at work, and that Black respondents report a particularly low sense of belonging. The field must work to provide a sense of inclusion for all women and non-binary people, or else it will reproduce inequities around race, ethnicity, sexuality, and other factors, even as it rectifies gender inequities.

Finally, the report reveals how interpersonal and internal experiences combine to affect the professional lives of women and non-binary technologists. For instance, many respondents report negative job interview experiences, lack robust professional networks, and feel uncomfortable asking for a promotion. These problems are especially pronounced for Black and LGBTQIA technologists.

The sections of this report should be understood together; interpersonal, internal, and professional experiences relate to each other in mutually reinforcing ways. These experiences can easily become a vicious cycle, as negative experiences will beget negative impacts, and negative impacts will beget negative experiences. But this cycle can also be harnessed to create a perpetual motion machine of equity and inclusion, in which positive external experiences, internal impacts, and professional impacts will continuously build on one another to push the tech world into even greater heights.

**All findings in this report are of women and non-binary technologists.**

# EXECUTIVE SUMMARY

| **1902**<br>Total Responses | 96.0% Women<br>2.1% Non-binary<br>16.1% BLNP | 94.6% Technologists<br>14.4% LGBTQIA<br>41.0% Students |
|---|---|---|

TechEES collected data from 1,902 respondents from September to December 2021. The following data points are specific to the experiences of women and non-binary technologists in 2021.

## STATE OF INTERPERSONAL EXPERIENCES IN TECH
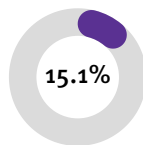
Percent of women and non-binary technologists who have experienced the following in the field of tech:
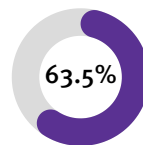
Discrimination 93.4%          Harassment 100.0%

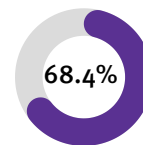## STATE OF INTERNAL IMPACTS IN TECH
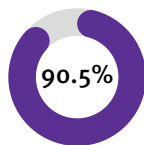
**90.5%** experience feelings of imposter phenomenon

**15.1%** feel unsafe taking risks at work

**63.5%** have a sense of belonging in their place of work

**68.4%** feel stressed often or very often

## STATE OF PROFESSIONAL IMPACTS IN TECH

**Average Satisfaction in Tech**
*Scale: 1 (Very dissatisfied)- 10 (Very satisfied)*

**7.3** Job Satisfaction

**7.5** Academic Satisfaction
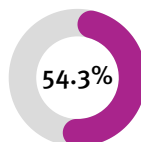
**54.3%** had a good or excellent experience during their last job search

**40.1%** have a robust professional network

**55.1%** feel they are being paid fairly for the work they do

**41.8%** have been passed over for a promotion they felt they deserved
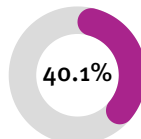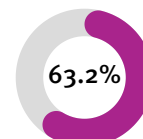
**63.2%** see themselves at their place of work in a year

# STATE OF INTERPERSONAL EXPERIENCES IN TECH
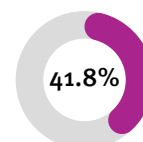
**Interactions with people in tech are influencing how women and non-binary technologists experience the field.**



Technologists experience the field of technology in connection and relation with other people. Whether they are interacting with their professors and classmates at school or their colleagues and managers at work, these interactions are affecting technologists' perceptions of the field. This study reveals that women and non-binary technologists experience rampant discrimination and harassment in the tech world. While many respondents report gender-based discrimination or harassment, respondents also face other forms of harassment based on intersectional identities such as race/ethnicity, caregiving status, age, and disability. In particular, the data overwhelmingly show that Black respondents are having the worst interpersonal experiences in tech.

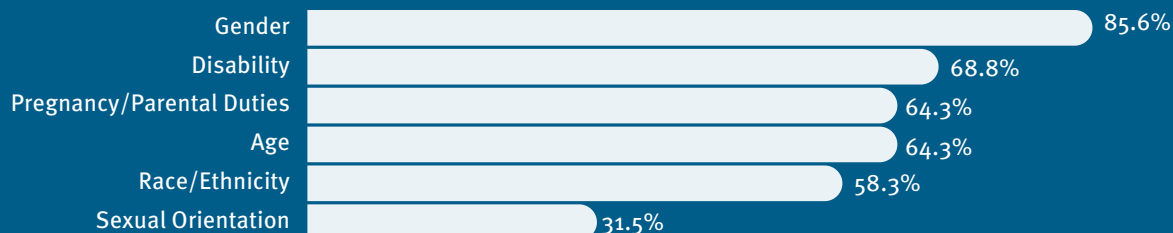# Nine in ten women and non-binary technologists experience discrimination.
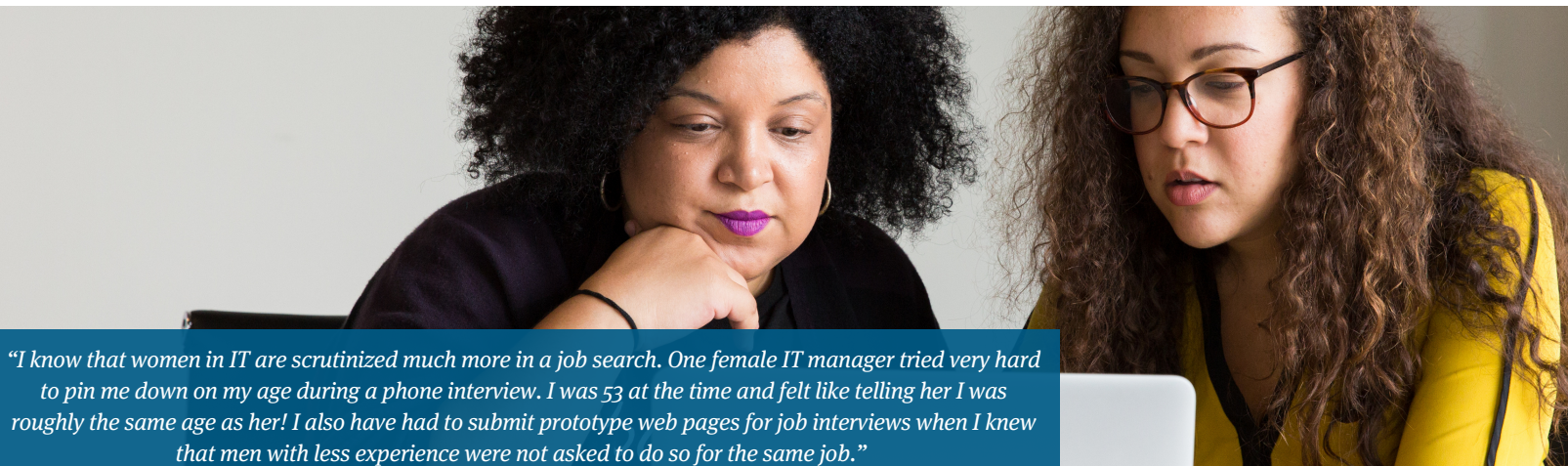
*"I know that women in IT are scrutinized much more in a job search. One female IT manager tried very hard to pin me down on my age during a phone interview. I was 53 at the time and felt like telling her I was roughly the same age as her! I also have had to submit prototype web pages for job interviews when I knew that men with less experience were not asked to do so for the same job."*

– Senior, White, Woman

While women and non-binary people face discrimination in many fields, it is alarming how pervasive these experiences are in tech. In the survey, we asked technologists to share how often they experienced different types of discrimination in the field of tech, with "never" being an option. Overall, 93.4% of women and non-binary technologists have experienced at least one type of discrimination based on gender, race/ethnicity, age, or other factors.

## Types of Discrimination Women and Non-binary Technologists Experience*
Percent who have experienced the following types of discrimination:

| Type | Percent |
|---|---|
| Gender | 85.6% |
| Disability | 68.8% |
| Pregnancy/Parental Duties | 64.3% |
| Age | 64.3% |
| Race/Ethnicity | 58.3% |
| Sexual Orientation | 31.5% |

*Note: Discrimination for parental duties is reporting the percentage of caregivers who experienced discrimination. The discrimination percent for disabilities is the percentage of women and non-binary technologists with a disability who have experienced discrimination.

**Overall, 58.3% of women and non-binary technologists report experiencing racial and/or ethnic discrimination in the field of tech, but this number jumps to 77.7% for BLNP technologists.**

Women and non-binary technologists who are Black are experiencing racial/ethnic discrimination 4x more than their White peers.

## Experiences of Racial/Ethnic Discrimination
Percent of women and non-binary technologists who experience racial/ethnic discrimination in the field of tech:

| Asian | Black | Latinx | White |
|---|---|---|---|
| 67.7% | 81.6% | 72.9% | 20.7% |

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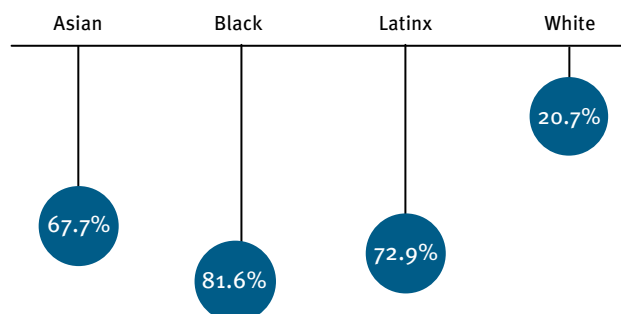
# Gender harassment increased by 23.2% since 2019 for women and non-binary technologists.

While we measure discrimination with a broad question about the overall experience, we measure harassment with specific questions about particular kinds of speech and behavior. Disturbingly, more women report experiencing at least one form of gender-based harassment in 2021 than in 2019. This problem is most pressing for inexperienced workers: the fewer years of work experience a technologist has, the more frequently they report experiencing gender harassment. It is unclear whether this harassment is coming from peers or upper-level management, but it is clear that organizations must offer programming to all technologists, to help them understand, identify and report gender harassment.

**Experiences of Gender Harassment**
Percent of women & non-binary technologists who report experiencing at least one type of gender harassment:

69.0% 2019

85.0% 2021
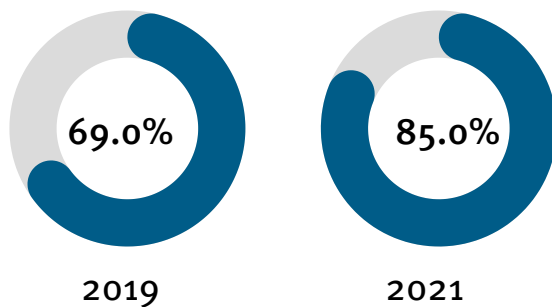
**Gender Harassment Relationships**
Women and non-binary technologists who have experienced gender harassment in the workplace have (p≤ 0.01):

↑ Increased perceived stress

↓ Decreased job satisfaction

↓ Decreased psychological safety

↓ Decreased feelings of belonging

**Details of Gender Harassment Experiences in the Workplace**
Percent of women and non-binary technologists who report the following gender harassment experiences in the workplace:

2019  2021

82.0% 75.2% treating you differently because of your gender

71.0% 64.5% putting you down because of your gender

57.0% 51.2% making offensive sexist remarks to or around you

# Students in tech are experiencing sexual harassment at higher rates than technologists in the workplace.



Sexual harassment in the field of technology is happening both at school and at work, but students in tech are experiencing sexual harassment at higher rates than technologists in the workplace.

## Experiences of Sexual Harassment

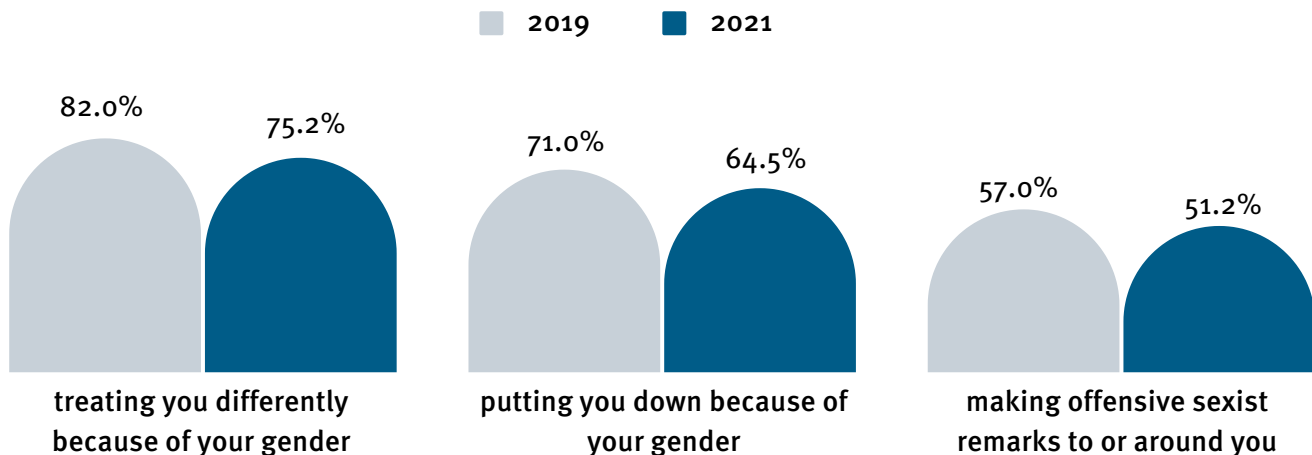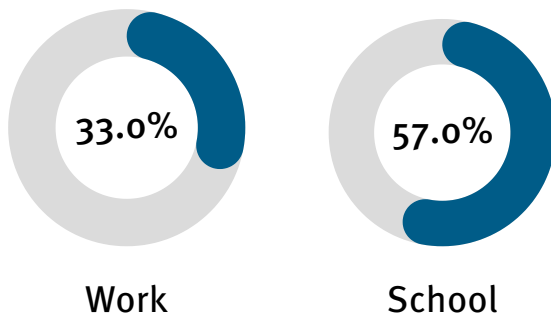Percent of women and non-binary technologists who report experiencing at least one form of sexual harassment at work or school:

**33.0%** Work

**57.0%** School

## Experiences of Sexual Harassments at Work and School

Percent of women and non-binary technologists who experience sexual harassment:

| | Asian | Black | Latinx | White |
|---|---|---|---|---|
| Work | 32.0% | 34.8% | 45.0% | 28.9% |
| School | 59.3% | 45.7% | 70.8% | 43.8% |

● Work  ● School
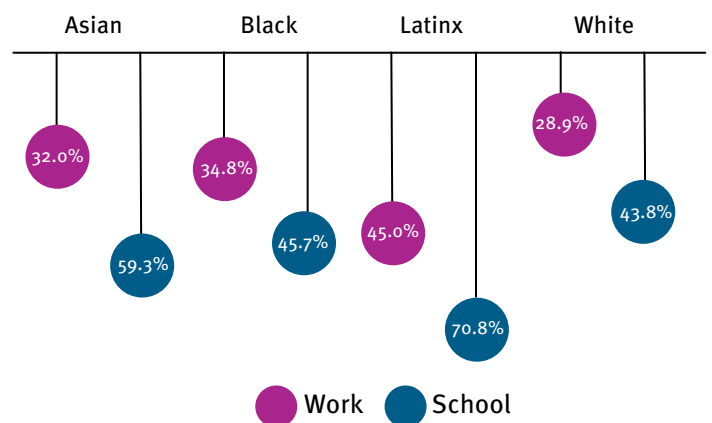
## Details of Sexual Harassment Experiences at School

Latinx tech students are experiencing sexual harassment at higher rates than other tech students. Percent of women and non-binary who are Latinx tech students who experience someone at school:

| | |
|---|---|
| giving you unwanted sexual attention | 50.0% |
| making crude sexual remarks toward you | 45.8% |
| touching you in a way that made you feel uncomfortable | 39.1% |
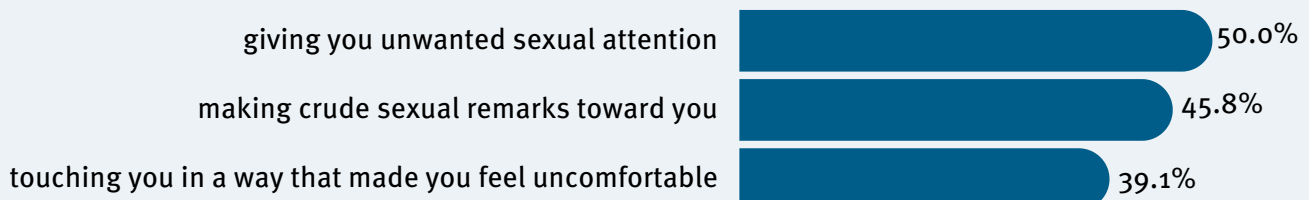
# Racial/ethnic harassment increased by 30.3% since 2019 for women and non-binary technologists of color.

Since 2020 many organizations have declared their commitment to antiracism and improving their environments for people of color at their organizations. However, experiences by women and non-binary technologists of color have not improved and, in fact, have worsened since 2019. Experiencing racial/ethnic harassment impacts technologists' overall job satisfaction, feelings of psychological safety, and sense of belonging. Black respondents report the highest incidence of racial/ethnic harassment.

## Experiences of Racial/Ethnic Harassment
Percent of women and non-binary technologists of color who report experiencing at least one type of racial/ethnic harassment:

45.5%
2019
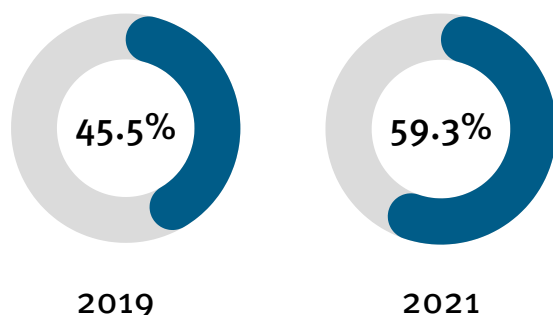
59.3%
2021

## Racial/Ethnic Harassment Relationships
Experiencing racial/ethnic harassment is correlated with (p≤ 0.001):

↓ Decreased job satisfaction

↓ Decreased psychological safety

↓ Decreased feelings of belonging

## Racial/Ethnic Harassment Experiences
Percent of women and non-binary technologists who experience racial/ethnic harassment at school or work:

| Asian | Black | Latinx | White |
|-------|-------|--------|-------|
| 65.3% | 76.8% | 72.6% | 33.6% |
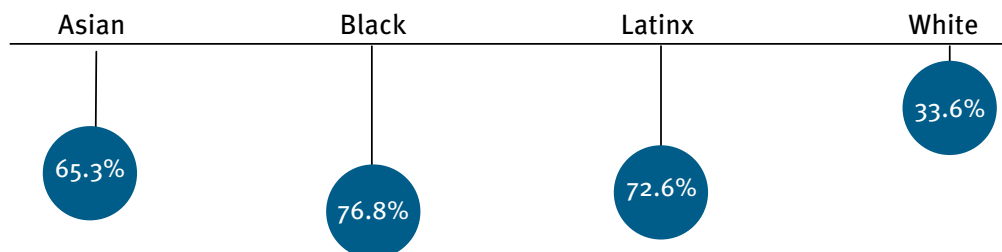
### Racism in the Field of Technology
AnitaB.org, The National Center for Women & Information Technology (NCWIT), and the STARS Computing Corps (STARS) conducted a study, Investigating Compounding Impacts of Racism & COVID-19 on Learning & Employment in Computing & Technology (CIRCLE-CT) Study, to understand the dual impacts of the global pandemic and heightened attention to racism on the conditions of work and education in fields related to computing and technology. [1]

1. AnitaB.org. (2021). Investigating Compounding Impacts of Racism & COVID-19 on Learning & Employment in Computing & Technology. Retrieved from https://4b7xbg26zfmr1aupi724hrym-wpengine.netdna-ssl.com/wp-content/uploads/2021/09/Circle-CT.Survey-2-Report.Final_.pdf

# STATE OF INTERNAL IMPACTS IN TECH

**Impacts on individual feelings and beliefs influence how women and non-binary technologists are experiencing tech.**

The interpersonal experiences outlined in the previous section have a deep impact on individual technologists' internal sense of wellbeing in the field. But technologists are not only experiencing the tech world in direct relationship with other people; they are also having individual, internal experiences of their value and belonging in the field. These internal experiences—including imposter phenomenon, psychological safety, belonging, and stress— are all deeply intertwined with one another, and they have been shown to influence professional outcomes. Therefore, companies need to work to improve these internal experiences holistically to create a more inclusive tech universe.

# Women and non-binary technologists who are Latinx report the highest experiences of imposter phenomenon.

Imposter phenomenon is the experience of believing you are not as competent as others perceive you to be and often feeling like a fraud.[2] Respondents who are Latinx, those who are not caregivers, and those who identify as LGBTQIA each have significantly higher values of imposter phenomenon (p≤ 0.01) than their counterparts. Overall, women and non-binary technologists' experience of imposter phenomenon decreases (p≤ 0.00001) as their career level increases. Likewise, the longer women and non-binary technologists have been with a particular organization, the less likely they are to experience imposter phenomenon (p≤ 0.001).

## Feelings of Imposter Phenomenon

Average imposter phenomenon score by race/ethnicity:
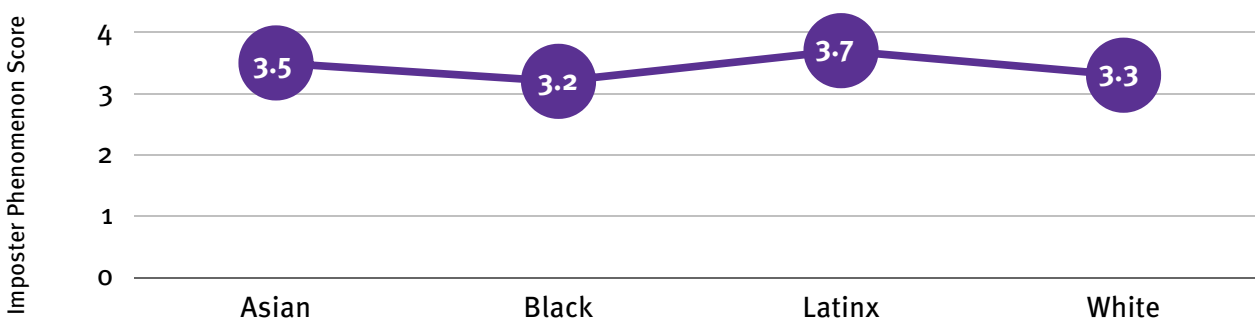


Note: A higher score indicates more experiences of feeling imposter phenomenon.

**Imposter Phenomenon Relationships**
Increased feelings of imposter phenomenon are statistically correlated with (p≤ 0.01):

↑ Increased feelings of stress

↓ Decreased job satisfaction

↓ Decreased feelings of having a robust professional network in the field of tech

↓ Decreased tenure at their current organization



**How to address imposter phenomenon:**
- Focus on making the workplace a safe place to take risks and make mistakes, increasing psychological safety.
- Teach managers about growth mindset and how not to reinforce perfectionism.

2. Clance, P. R., & Imes, S. A. (1978). The imposter phenomenon in high achieving women: Dynamics and therapeutic intervention. *Psychotherapy: Theory, Research & Practice, 15*(3), 241–247. https://doi.org/10.1037/h0086006

# Women and non-binary technologists who are Black are least likely to feel safe taking risks on their teams.

Feeling safe from negative consequences or humiliation after sharing your ideas, questions, or mistakes is referred to as psychological safety.[3] Fostering psychological safety in the workplace leads to increased job satisfaction and feelings of belonging. The majority (62.9%) of women and non-binary technologists feel safe taking risks on their teams, but not all respondents feel equally safe. White respondents report the highest psychological safety score (4.0), while their Black peers report the lowest score (3.6). The psychological safety score is an aggregated number from 1-5, with a higher number indicating higher psychological safety.

## Psychological Safety Experiences
Percent of women and non-binary technologists who feel unsafe taking risks on their current team:

**13.0%** 2019

**15.1%** 2021
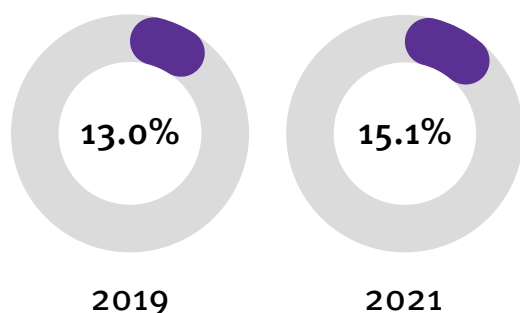
## Psychological Safety Relationships
For women and non-binary technologists, increased psychological safety is correlated with (p ≤ 0.01):

↑ Increased job satisfaction

↑ Increased feelings of belonging in the workplace

↑ Increased feelings of being paid fairly

## Feelings of Psychological Safety
Percent of women and non-binary technologists who feel safe taking risks on their team:

53.6% Asian

44.7% Black

71.4% Latinx

75.6% White
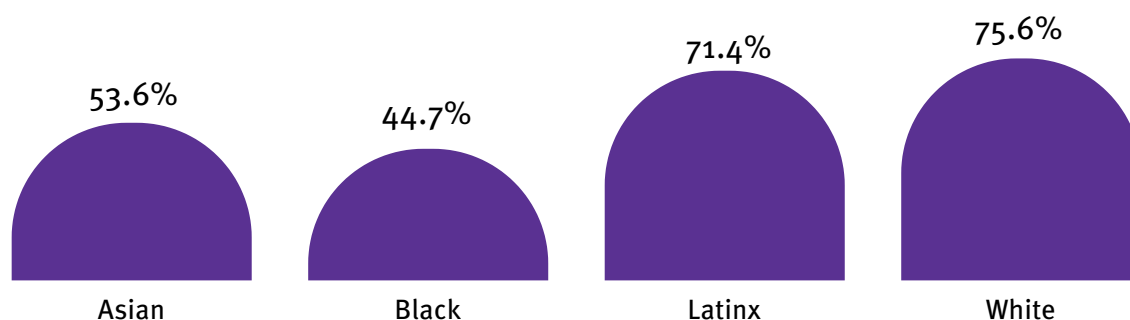
**How to address psychology safety:**
- Regularly measure psychological safety at the team level and incentivize good scores for managers.

3. Newman, A., Donohue, R., & Eva, N. (2017). Psychological safety: A systematic review of the literature. *Human Resource Management Review, 27*(3), 521–535. https://doi.org/10.1016/j.hrmr.2017.01.001

# Women and non-binary technologists who are Black have the lowest sense of belonging in the workplace.

Belonging is the sense of being valued and accepted by those around you in the workplace.[4] Belonging is an important indicator of the overall status of technologists in the workplace. It is statistically correlated with positive outcomes in the workplace around retention, pay equity, and advancement. Overall, 63.5% of women and non-binary technologists feel like they have a sense of belonging at their place of work, but Black, Asian, and Latinx respondents have a lower sense of belonging than their White peers.

## Predictors of Belonging
In our study, we found five main predictors of belonging. The largest predictor of belonging is feeling that their current role accurately represents their skills ($p \leq 0.00001$).

The five main predictors of belonging are:

Feelings of being paid fairly

Feelings of work-life balance

Feeling that current role accurately represents skills

Feeling valued for unique characteristics in the workplace

Psychological safety

**Belonging**

## Feelings of Belonging
Percent of women and non-binary technologists who have a sense of belonging at their place of work:

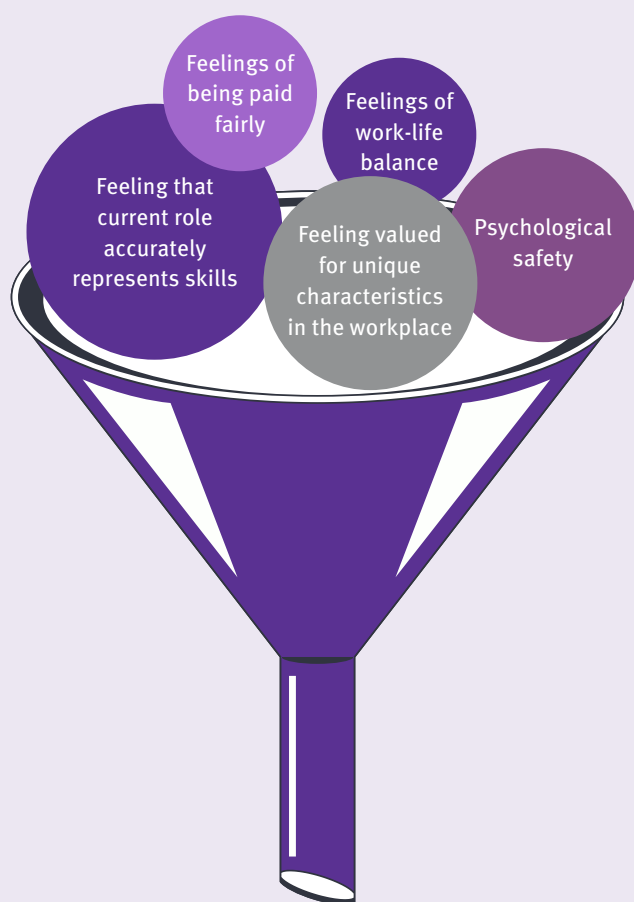| Asian | Black | Latinx | White |
|---|---|---|---|
| 56.6% | 46.3% | 62.9% | 73.5% |
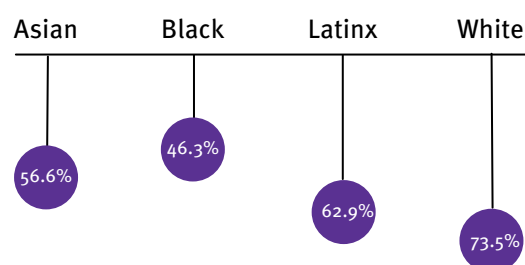
## Belonging Relationships
For women and non-binary technologists, increased feelings of belonging are correlated with ($p \leq 0.00001$):

⬆ Increased comfort asking for a promotion

⬆ Increased intent to stay at their workplace a year from now

⬆ Increased comfort in requesting paid time off or sick days

⬇ Decreased experiences of ethnic harassment

⬇ Decreased perceived stress

4. Waller L. (2020) Fostering a Sense of Belonging in the Workplace: Enhancing Well-Being and a Positive and Coherent Sense of Self. In: Dhiman S. (eds) *The Palgrave Handbook of Workplace Well-Being*. Palgrave Macmillan, Cham. https://doi.org/10.1007/978-3-030-02470-3_83-1

We asked respondents to share what factors were most important to their feelings of belonging in the workplace. The top three most important factors to feelings of belonging in the workplace are:

Feeling that your work is valued

Relationships with coworkers

Company culture

As technologists gain more years of experience, they identify different factors as central to their sense of belonging in the workplace:

**Fewer than 8 years of experience:**
- Connection to the mission
- Enjoyment of work

**8-10 years of experience:**
- Company culture
- Relationships with coworkers

**More than 10 years of experience:**
- Relationships with direct manager
- Feeling like work is valued

**Women and non-binary technologists who are Asian have the highest sense of belonging in the field.**

Women and non-binary technologists have a greater sense of belonging in the field of tech as a whole than in their individual workplaces. Overall, 82.4% of women and non-binary technologists feel like they belong in the field of technology.

Percent of women and non-binary technologists who feel like they belong in the field of tech:

| Asian | Black | Latinx | White |
|-------|-------|--------|-------|
| 84.7% | 82.7% | 75.0% | 79.3% |
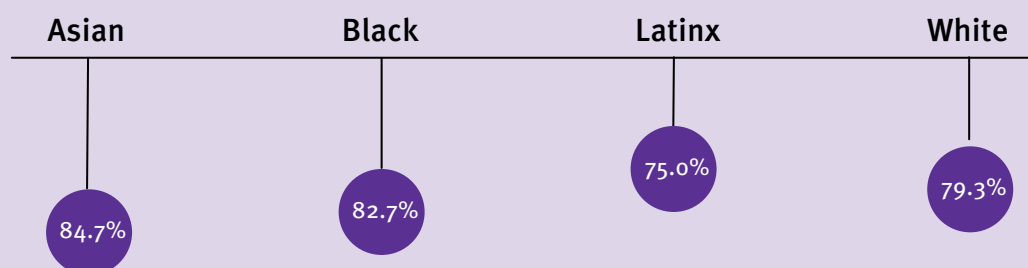
**How organizations can facilitate belonging:**
- Build a culture of inclusion where uniqueness is noticed and valued.
- Regularly measure employee feelings of belonging; hold listening sessions with groups that score lowest to learn how to improve the workplace.

# Stress is driving decreased feelings of belonging for women and non-binary technologists.
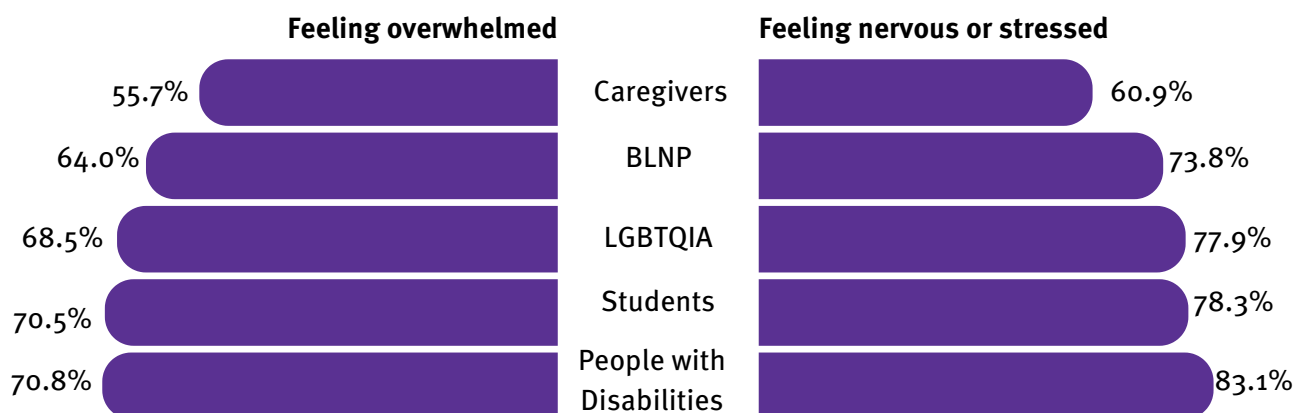
The majority (68.4%) of women and non-binary technologists report feeling stressed often or very often. Over half (54.7%) of these technologists also report having a significant workload. For women and non-binary technologists, their sense of belonging decreases as perceived stress increases ($p \leq 0.00001$).
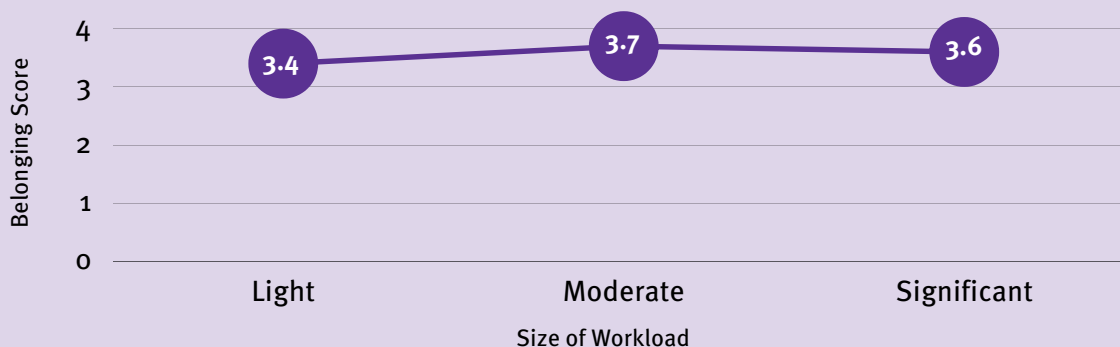
## Feelings of Stress

Percent of women & nonbinary technologists who experience the following often or very often:

| | Feeling overwhelmed | | Feeling nervous or stressed |
|---|---|---|---|
| Caregivers | 55.7% | | 60.9% |
| BLNP | 64.0% | | 73.8% |
| LGBTQIA | 68.5% | | 77.9% |
| Students | 70.5% | | 78.3% |
| People with Disabilities | 70.8% | | 83.1% |

## Belonging and Workload Relationship

Women and non-binary technologists have the highest level of belonging when their workload is moderate, not too light, and not too significant ($p \leq 0.05$). This finding indicates that technologists want to feel that their skills and expertise are being utilized appropriately at work, and that they are valued for their unique contributions in the workplace, while also maintaining an appropriate work-life balance.

Belonging Score vs Size of Workload:
- Light: 3.4
- Moderate: 3.7
- Significant: 3.6

Note: A higher score indicates increased feelings of belonging.

**How organizations can support women & non-binary technologists dealing with stress:**
- Foster a psychologically safe place.
- Create a culture of flexible work.
- Provide technologists with the right resources and programs.[5]

5. Kurter, H. L. (2021, December 10). Employers, here are 4 ways you can begin to effectively tackle employee burnout. *Forbes*. Retrieved from https://www.forbes.com/sites/heidilynnekurter/2021/04/27/employers-here-are-4-ways-you-can-begin-to-effectively-tackle-employee-burnout/?sh=483270d96009

# STATE OF PROFESSIONAL IMPACTS IN TECH

**Interpersonal experiences and internal impacts in technology are having a direct professional impact on women and non-binary technologists.**

Interpersonal and internal experiences combine to influence the professional experiences of women and non-binary technologists, including their job search, networks, job satisfaction, pay equity, advancement, and retention. It is not enough for organizations to work to achieve equity in representation and pay on paper, if women and non-binary technologists continue having negative professional experiences in practice. The tech world must also work to improve these professional experiences if it hopes to achieve true diversity, equity, and inclusion.

# LGBTQIA women and non-binary technologists have the worst experiences during their job searches.



*"I personally have thrived from joining organizations that support career development, networking, and have a general focus on discovering passions within the technical industry."*
– Entry, Latinx, Woman

54.3% of women and non-binary technologists report that their last job search in the tech field was a good or excellent experience. However, LGBTQIA and Black technologists rate their job search experience as less positive (p≤0.001). Technologists who hold a Master's degree are more likely to have a good or excellent job search experience compared to technologists with a Bachelor's or a recognized certificate.

## Positive Job Experiences
Percent of women and non-binary technologists who had a good or excellent experience during their last job search:

| Asian | Black | Latinx | White | LGBTQIA |
|-------|-------|--------|-------|---------|
| 55.4% | 42.4% | 58.6% | 56.1% | 41.9% |
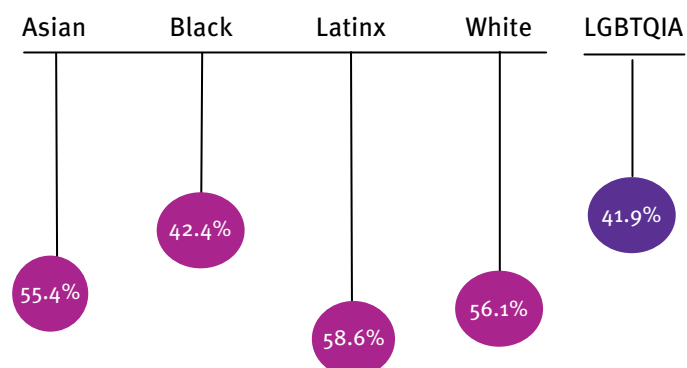
## Resources for the Job Search
We asked technologists what the most helpful resources were during their last job search. The top three most helpful resources in the job search were:

Online job posting platforms

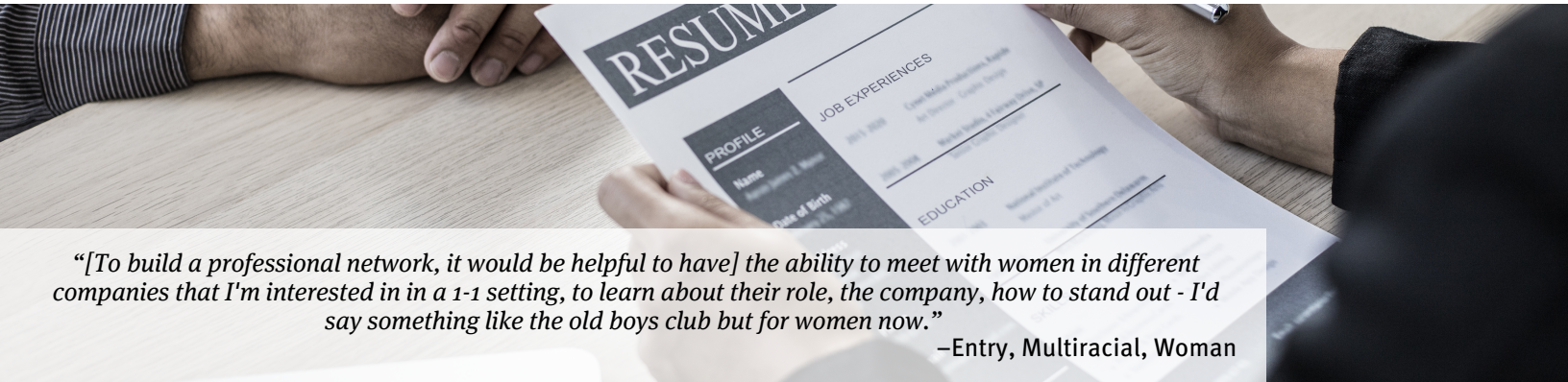Personal networks

AnitaB.org resume database/job board

**How institutions can support women and non-binary people during their journey into tech:** [6]
- Recruit from Historically Black Colleges and Universities, other Minority Serving Institutions, bootcamps or other certification programs, community colleges, and apprenticeship programs.
- Implement the following best practices into the hiring process: have structured, behavior-based interview questions, implement a rubric for assessing candidates, require a diverse slate of candidates for interviews, and require a diverse interview panel.

6. AnitaB.org. (2021, September 28). 2021 Top Companies for Women Technologists. Top Companies for Women Technologists 2021 Key Findings and Insights. Retrieved from https://anitab.org/research-and-impact/top-companies/2021-results/

# Only 40.1% of women and non-binary technologists feel they have robust professional networks.

*"[To build a professional network, it would be helpful to have] the ability to meet with women in different companies that I'm interested in in a 1-1 setting, to learn about their role, the company, how to stand out - I'd say something like the old boys club but for women now."*

–Entry, Multiracial, Woman

Professional networks are an important component of an individual's professional experience; it is often through these professional networks that people learn about job opportunities, gain the confidence to pursue advancement opportunities, and generally feel like they belong. Professional networks also often include a professional relationship with a mentor in the field.

## Robust Professional Network
Percent of women and non-binary technologists who feel like they have a robust professional network in tech:

Asian — 39.2%
Black — 43.9%
Latinx — 46.9%
White — 39.7%
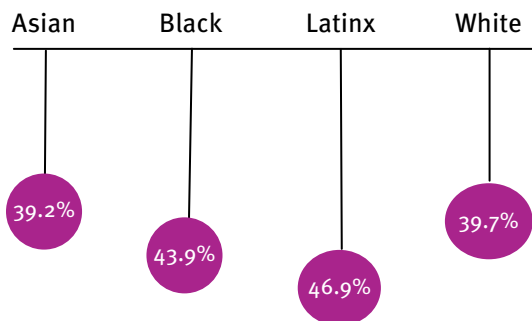
## Professional Networks Relationships
Having a strong network in the field of tech is correlated with ($p \leq 0.001$):

↑ Increased feelings of belonging in the field of tech

↑ Increased feelings of psychological safety

↓ Decreased feelings of imposter phenomenon

↓ Decreased perceived stress

## How institutions can help women and non-binary people build a robust technical network:

- Formalize a mentorship or sponsorship program: Top Companies for Women Technologists found that 60.4% of participating 2021 companies offer a formal sponsorship program. These programs were found to increase representation of Black and Latinx tech women in mid and senior level roles.
- Foster and encourage participation in employee resource groups (ERGs) in the workplace: ERGs are found to increase connections between employees around a shared identity.
- Encourage participation in professional technical conferences for employees: Conference settings are a unique way to meet and network with other individuals around a shared interest or expertise, and foster networking outside of an organization.

7. AnitaB.org. (2021, September 28). 2021 Top Companies for Women Technologists. Top Companies for Women Technologists 2021 Key Findings and Insights. Retrieved from https://anitab.org/research-and-impact/top-companies/2021-results/

# Job satisfaction for women and non-binary technologists has remained about the same since 2019.

Despite the changes to the tech workforce due to the COVID-19 pandemic, job satisfaction has stayed consistent for women and non-binary technologists since 2019. Job satisfaction is linked to many positive experiences in the workplace.

## Average Job Satisfaction
Women & non-binary technologists:
*Scale: 1 (Very dissatisfied)- 10 (Very satisfied)*

**7.1** 2019    **7.3** 2021

## Job Satisfaction Relationships
For women and non-binary technologists, increased job satisfaction is correlated with (p≤0.01):

↑ Increased feelings of belonging

↑ Increased feelings of psychological safety

↓ Decreased feelings of imposter phenomenon

↓ Decreased experiences of racial/ethnic harassment

↓ Decreased perceived stress

### Technologists with disabilities have lower job satisfaction than technologists without disabilities.

On average, women and non-binary technologists with a disability have a job satisfaction of 6.9. Although the tech field is making great strides in accessibility, major gaps remain.[8] 9.5% of our respondents identified as having a disability. Of those, the two most common types were mental health conditions (54.0%) and health-related disabilities (36.7%).

## Predictors of Job Satisfaction

Because job satisfaction is correlated with so many positive experiences in the workplace, it is crucial to understand what exactly is driving job satisfaction. Belonging is the largest driver of job satisfaction, perceived stress and psychological safety also predict job satisfaction but at a much smaller scale (p≤ 0.00001).

The three main predictors of job satisfaction are:

Perceived stress
Belonging
Psychological safety

# Job Satisfaction

8. Coldewey, D. (2020, July 28). As Ada turns 30, Tech is just getting started helping people with disabilities.

# Across all career levels, women and non-binary technologists who are Black continue to be paid less than their peers.

At a time when pay transparency is a hot-button topic and many technologists have openly shared their compensation on social media, only 55.1% of women and non-binary technologists feel like they are being paid fairly for the work they do. In 2019, 58.0% of women technologists said they were paid fairly for the work they do. Although Asian women and non-binary technologists are reporting some of the highest incomes of all women & non-binary respondents, they are least likely to say they feel like they are paid fairly ($p \leq 0.01$).
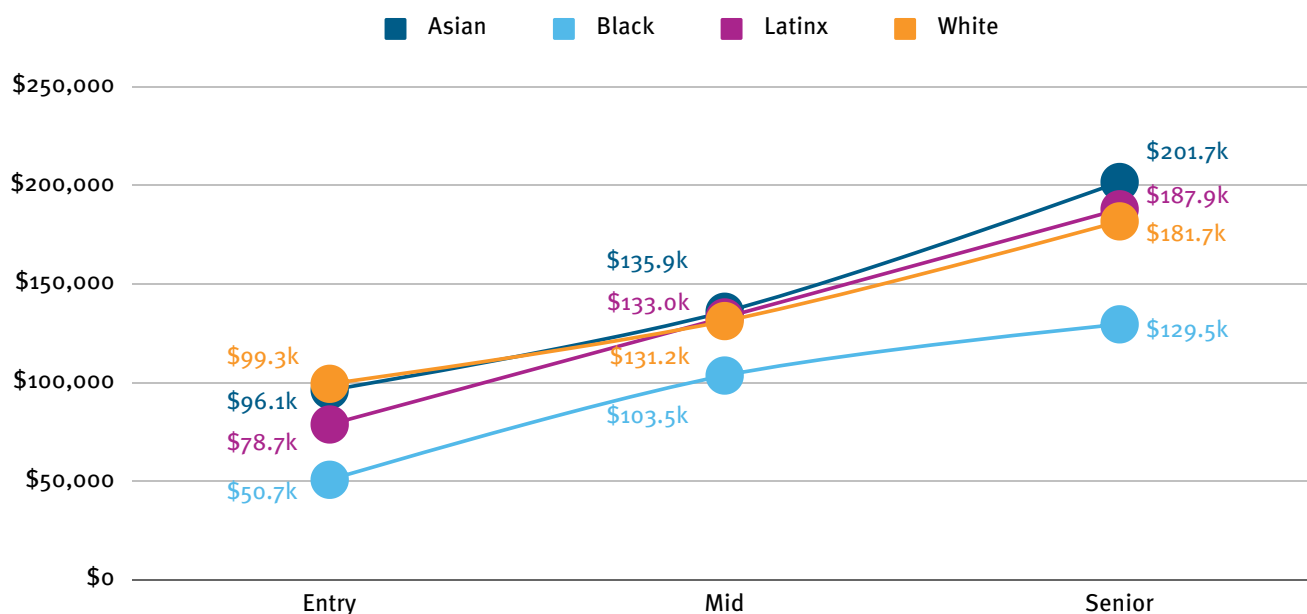
## Feelings of Fair Pay

The number of women and non-binary technologists out of ten who feel like they are paid fairly for the work they do:

Asian
Black
Latinx
White
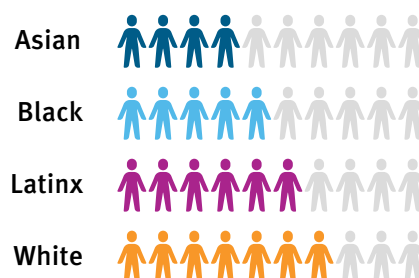
## Salary by Race/Ethnicity

Average women and non-binary technologists' salary by race/ethnicity and career level:

■ Asian    ■ Black    ■ Latinx    ■ White



Entry: White $99.3k, Asian $96.1k, Latinx $78.7k, Black $50.7k
Mid: Asian $135.9k, Latinx $133.0k, White $131.2k, Black $103.5k
Senior: Asian $201.7k, Latinx $187.9k, White $181.7k, Black $129.5k

**How institutions can foster pay equity:**

Engage in pay transparency practices: Top Companies for Women Technologists found that few companies are engaging in pay transparency practices that are linked to reducing the wage gap, including:[8]

- Providing compensation ranges for open positions internally.
- Including a salary or salary range on job descriptions.
- Performing an annual pay equity audit analyzing intersectional gender and race/ethnicity data.

8. AnitaB.org. (2021, September 28). 2021 Top Companies for Women Technologists. Top Companies for Women Technologists 2021 Key Findings and Insights. Retrieved from https://anitab.org/research-and-impact/top-companies/2021-results/

# Entry-level women and non-binary technologists are significantly less likely to feel comfortable asking for a promotion.
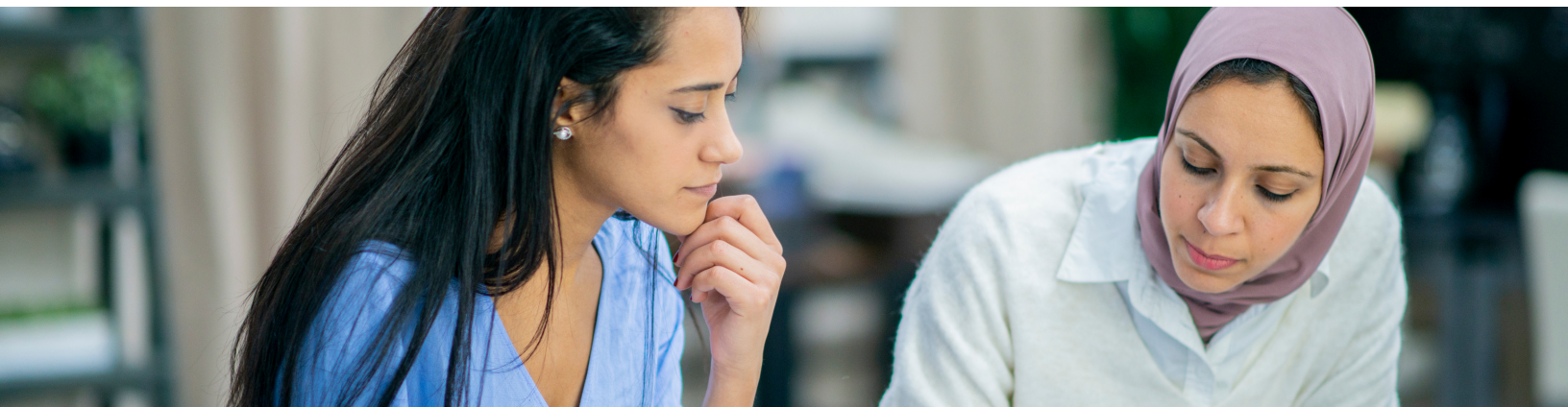


Top Companies for Women Technologists found that women technologists were promoted at higher rates than men over the last few years.[9] However, in our findings, only 47.6% of women technologists feel comfortable asking for a promotion at work. As technologists advance in their career level, their comfort level asking for a promotion increases.

## Experiences of Advancement

Percent of women and non-binary technologists who agree with the following:

Fewer experiences ▱▰ More experiences

|  | All | Entry | Mid | Senior |
|---|---|---|---|---|
| I feel comfortable asking for a promotion | 47.6% | 33.5% | 46.3% | 63.7% |
| I have been passed over for a promotion that I felt I deserved | 41.8% | 23.3% | 47.4% | 50.0% |

**Caregivers experience negative outcomes related to advancement in the workplace despite reporting more positive experiences in their tech journey than their non-caregiving peers.**

Women and non-binary technologists who are caregivers are significantly more likely to report having been passed over for a promotion they felt they deserved than non-caregiver technologists (p≤0.01). However, they are more comfortable asking for a promotion than non-caregivers (p≤0.03). Caregivers also report more positive experiences in their tech journey, including:

- During their last job search
- In their current role

9. AnitaB.org. (2021, September 28). 2021 Top Companies for Women Technologists. Top Companies for Women Technologists 2021 Key Findings and Insights. Retrieved from https://anitab.org/research-and-impact/top-companies/2021-results/
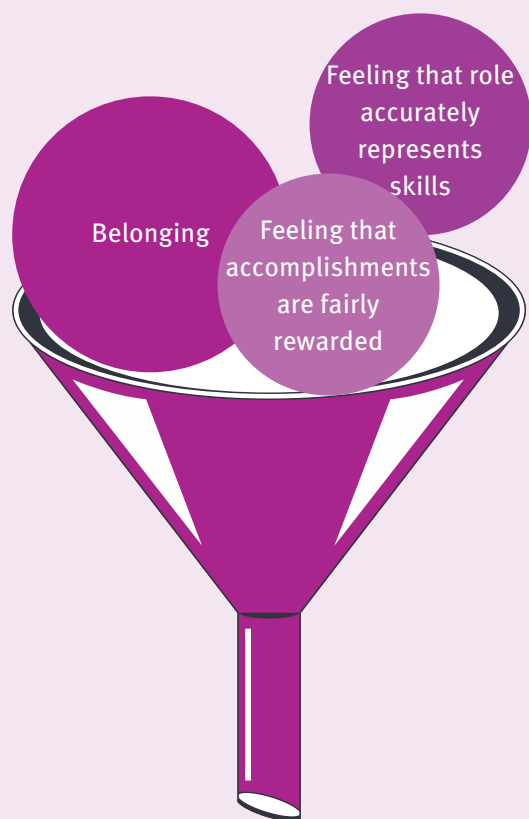
# Women and non-binary technologists who are Black are most likely to leave their current place of work.

Given the widespread news reports of the Great Resignation in the overall United States workforce, it is surprising that 63.2% of women and non-binary technologists see themselves working at their current place of work a year from now. Overall, senior-level technologists have the greatest percent reporting an intent to stay in their current workplace.

## Predictors of Retention

We asked respondents to indicate to what extent they see themselves working at their current workplace in a year. We found that belonging is the largest driver of this metric. Other factors—feeling that accomplishments are fairly rewarded and that the role accurately represents one's skills—also drive retention but at a much smaller scale (p≤ 0.00001).
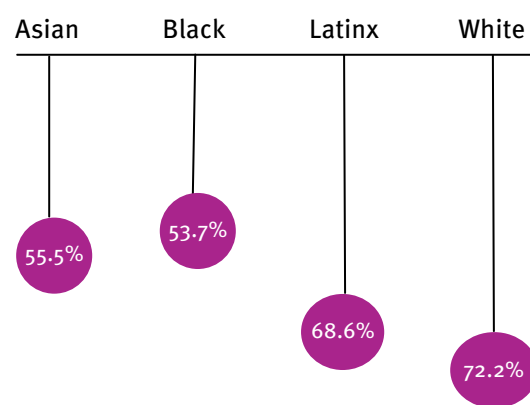
The three main predictors of retention are:

Feeling that role accurately represents skills

Belonging

Feeling that accomplishments are fairly rewarded

**Retention**

## Feelings of Retention

Percent of women and non-binary technologists who see themselves working at their current workplace in a year:

| Asian | Black | Latinx | White |
|-------|-------|--------|-------|
| 55.5% | 53.7% | 68.6% | 72.2% |

## Retention Relationships

For women and non-binary technologists, increased feelings of intent to stay at their current workplace are correlated with (p≤0.00001):

↑ Increased feelings of being paid fairly

↑ Increased feelings of skills and talents being valued at work

↑ Increased feelings of psychological safety

↓ Decreased perceived stress

# 64.1% of women and non-binary technologists who have taken an extended leave of absence describe their experience returning to work as good or excellent.
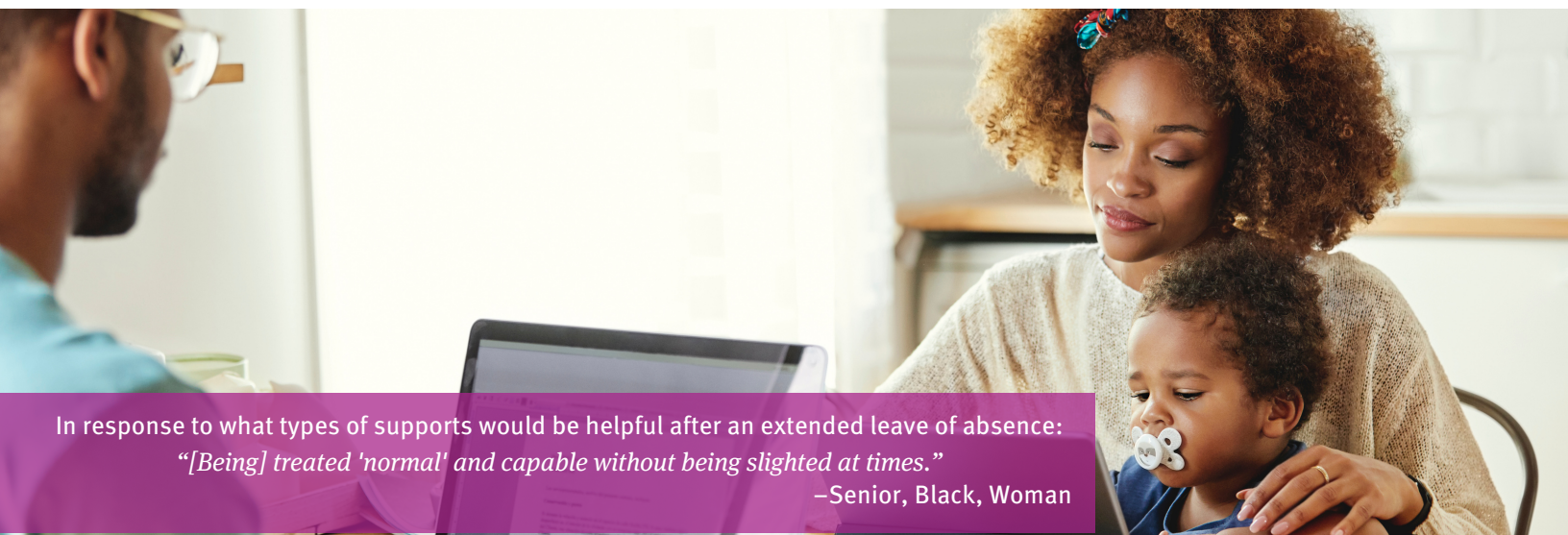


In response to what types of supports would be helpful after an extended leave of absence:
*"[Being] treated 'normal' and capable without being slighted at times."*
–Senior, Black, Woman

Technologists take extended leaves of absence for a variety of reasons, including the birth or adoption of a new child, the decreasing health of a family member, or a debilitating health condition. In our study, 25.3% of women and non-binary technologists report having taken an extended leave of absence. One way to retain technologists is to ensure they have avenues back into the workplace after they take an extended leave of absence.

## Returning to Work Relationships

Positive experiences returning to work after an extended leave of absence are correlated with ($p < 0.00001$):

↑ Increased job satisfaction

↑ Increased feelings of belonging

↑ Increased feelings of psychological safety

↓ Decreased perceived stress

## Resources for Returning to Work After an Extended Leave of Absence

We asked technologists who have taken an extended leave of absence to share what was or would have been the most useful resources when returning to work. The following are the top three responses:

Remote work (90.5%)

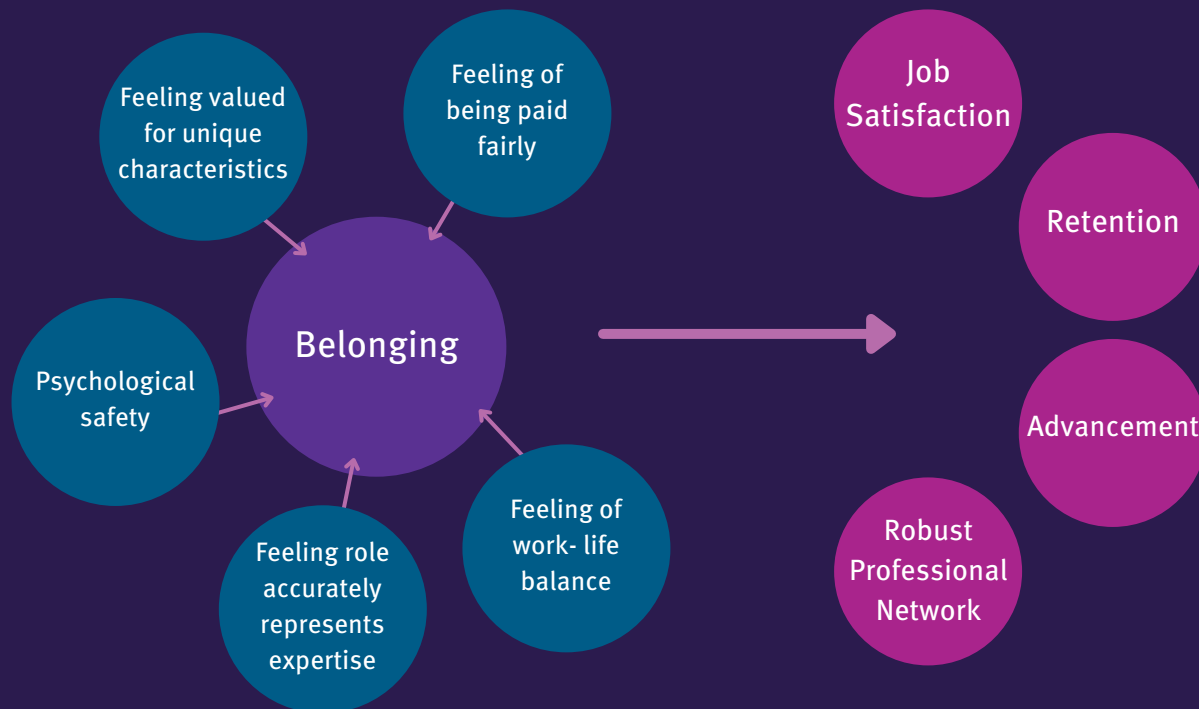Flexible work schedule (85.9%)

Paid company programs that provide upskilling or reskilling (61.7%)

# CONCLUSION

In 2021, we learned that the field of technology continues to have a rampant diversity, equity, and inclusion problem. While we were already aware of the urgent need to address issues such as harassment and pay inequity, this report reveals that belonging is a crucial piece of the puzzle. An increased sense of belonging has a profound professional impact for women and non-binary technologists in areas including advancement, networking, retention, and overall job satisfaction. It is therefore unacceptable that the overall sense of belonging for women and non-binary technologists is only 63.5%, and even more troubling that Black respondents report the lowest sense of belonging and the worst professional experiences. To improve the overall tech ecosystem for women and non-binary technologists, organizations and institutions should focus on developing those factors found to predict belonging.

## Predictors of Belonging (p≤0.00001)

Feeling valued for unique characteristics

Feeling of being paid fairly

Psychological safety

Belonging

Feeling role accurately represents expertise

Feeling of work- life balance

Job Satisfaction

Retention

Advancement

Robust Professional Network

## Foster Positive Professional Experiences for Technologists

### Understand the Needs of Technologists Intersectionally

No two people are having the same experience at work or school. Learn about the needs of technologists intersectionally to help you develop customized programming and resources to address inequities in retention, advancement, and job satisfaction.

### Measure Key Workplace Diversity, Equity, Inclusion, and Belonging Constructs

Include measures of imposter phenomenon, job/academic satisfaction, belonging, and psychological safety in your anonymous culture survey to get an idea of the status of these issues at your institution or organization.

# METHODS

We invited individuals to participate in the survey during the Grace Hopper Celebration 2021 and also solicited responses through social media and AnitaB.org newsletters. The survey was open to all adults aged 18 and over of all genders, and both technologists and non-technologists were encouraged to participate. The data collection occurred between September and December 2021.

For the purposes of our analysis we combined women and non-binary technologists responses to analyze all the constructs of our study.

## Validated Scales

We used validated scales to measure key constructs in the study. These scales include multiple items that were aggregated to produce a score for each construct. The scales we used include:

- Sexual Experiences Questionnaire [10]
- Ethnic Harassment Experiences Scale [11]
- Psychological Safety Scale [12]
- Clance Impostor Phenomenon Scale [13]
- Perceived Stress Scale [14]
- General Belongingness Scale [15]
- Work-life Balance Scale [16]

## Limitations

- Limited Sample: This study did not receive a representative sample of key groups in technology, including people who are Middle Eastern or North African, Native American / Alaska Native / First Nations / Inuit / Aboriginal, Pacific Islander or Native Hawaiian, or men.
- Oversample: Unlike the tech ecosystem itself, our sample has an oversample of women technologists.

10. Fitzgerald, L. F., Gelfand, M. J., & Drasgow, F. (1995). Measuring sexual harassment: Theoretical and psychometric advances. *Basic and Applied Social Psychology, 17*(4), 425-445.
11. Schneider, K. T., Hitlan, R. T., & Radhakrishnan, P. (2000). An examination of the nature and correlates of ethnic harassment experiences in multiple contexts. *Journal of Applied Psychology, 85*(1), 3.
12. Edmondson, A. (1999). Psychological safety and learning behavior in work teams. Administrative Science Quarterly, 44(2), 350-383.
13. Chrisman, S. M., Pieper, W. A., Clance, P. R., Holland, C. L., & Glickauf-Hughes, C. (1995). Validation of the Clance impostor phenomenon scale. *Journal of Personality Assessment, 65*(3), 456-467.
14. Cohen, S., Kamarck, T., and Mermelstein, R. (1983). A global measure of perceived stress. Journal of Health and Social Behavior, 24, 386-396.
15. Malone, G. P., Pillow, D. R., & Osman, A. (2012). The General Belongingness Scale (GBS): Assessing achieved belongingness. *Personality and Individual Differences, 52*(3), 311–316. https://doi.org/10.1016/j.paid.2011.10.027
16. Brough, P., Timms, C., O'Driscoll, M. P., Kalliath, T., Siu, O.-L., Sit, C., & Lo, D. (2014). Work–life balance: A longitudinal evaluation of a new measure across Australia and New Zealand workers. *The International Journal of Human Resource Management, 25*(19), 2724–2744. https://doi.org/10.1080/09585192.2014.899262

# RESPONDENT UNIVERSE

The survey received a total of 1,902 responses. All demographic questions in the survey were optional. The demographics of our entire sample are as follows:
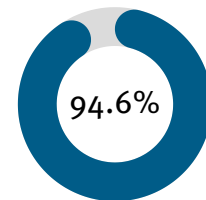
## Gender (n=1737)

We asked respondents to select their gender:

- Woman — 96.0%
- Non-binary — 2.1%
- Man — 1.9%
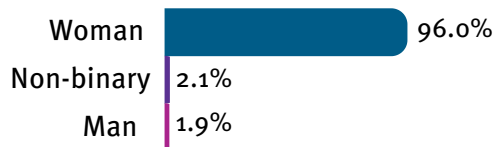
## Technologists* (n=1671)

We asked respondents whether they considered themselves technologists:

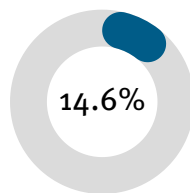94.6% indicated they are technologists

94.6%

The findings of this report are focused on the experiences of women and non-binary technologists. Therefore, the following demographics of our respondents are specific to women and non-binary technologists:

## LGBTQIA (n=1449)

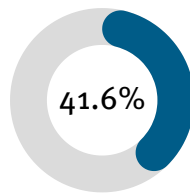Respondents indicated whether they are LGBTQIA:
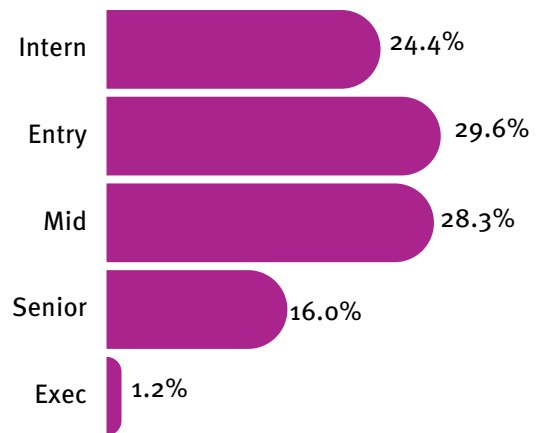
14.6% said yes

14.6%

## Students (n=1540)

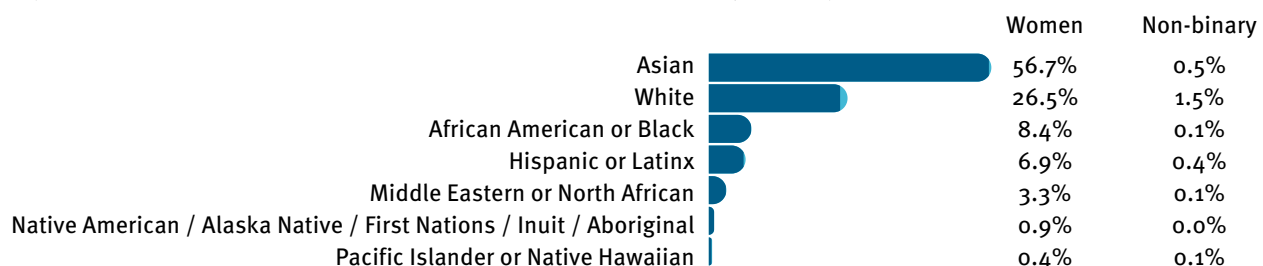Respondents indicated whether they are students:

41.6% said yes

41.6%

## Career Level (n=1412)

Respondents specified their career level:

- Intern — 24.4%
- Entry — 29.6%
- Mid — 28.3%
- Senior — 16.0%
- Exec — 1.2%

## Race and Ethnicity (n=1521)

Respondents were asked to indicate their race and ethnicity. Multiple identities could be chosen:

|  | Women | Non-binary |
|---|---|---|
| Asian | 56.7% | 0.5% |
| White | 26.5% | 1.5% |
| African American or Black | 8.4% | 0.1% |
| Hispanic or Latinx | 6.9% | 0.4% |
| Middle Eastern or North African | 3.3% | 0.1% |
| Native American / Alaska Native / First Nations / Inuit / Aboriginal | 0.9% | 0.0% |
| Pacific Islander or Native Hawaiian | 0.4% | 0.1% |

*Technologists are those who work in or are in training to work in the following areas: Computing and information technology, all occupations that require deep technical specialization and knowledge, as well as managers, directors, and executives who oversee technical employees and the development and delivery of technical products.*

ANITA B.ORG

2021 TechEES

# ABOUT ANITAB.ORG

At AnitaB.org, we envision a future where the people who imagine and build technology mirror the people and societies for whom they build it. We connect, inspire, and guide women in computing, and organizations that view technology innovation as a strategic imperative.

Our social enterprise supports women in technical fields, as well as the organizations that employ them and the academic institutions training the next generation. A full roster of programs helps women grow, learn, and develop their highest potential.

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