



Women in data science: breaking the glass ceiling

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If people were asked to associate a gender with data science, many would say “male.” But why is there such a widespread belief that complex “technical” activities can be undertaken only by men?

And to explore this assumption further, why is data science assumed to be a technical workstream? This mindset manifests itself in many ways in the daily life of a data science professional and in turn holds back women from succeeding in the industry.

The three major elements at play that hamper women’s ability to thrive

Only about 30 percent of the data science workforce is made up by women, and the number drops sharply to 18 percent as we move up to managerial and leadership positions. This low take-up has negative implications for society, as fewer women in the field means skewed algorithms, and sub-optimal and biased outputs.

The factors that lead to fewer women in data science start early with barriers to women entering the field, and they grow more entrenched as women work to make their mark as leaders in the field.

Here we identify three major elements at play that hamper women's ability to thrive in data science and recommend ways on how to counter them.

A lack of leaders who look like them

The lack of women leaders in data science has a compounding effect, by limiting awareness of role models. Most data scientists know only one female role model or leader, which makes it difficult for women who are new to the field to visualize their own career track.

Of course, having a role model who looks like you is not a prerequisite for a successful career in data science, but we can't discount its importance. [A 2018 Microsoft study](#) found that having STEM women role models increases women's interest in STEM careers by up to 52 percent.

One way to close the gap is through formal mentorship programs. Women leaders and HR can work together to develop formal programs that pair emerging data scientist leaders with more senior leaders to help them understand the big picture of their job, speak for them during performance reviews, and give them tailored feedback.

Women need to feel that they're not alone in this journey.

“Women with a voice are often termed intimidating and difficult to work with, resulting in extra effort to assert their voice and gain the recognition they deserve. Women need to speak up and support each other.”

—Vidisha Suman, Partner, Digital Transformation Practice, Kearney

An unbalanced workplace culture

Since [70 percent of data scientists are men](#), workplace culture can frequently become overtly masculine and less welcoming for the women who are on the team.

Even more troubling, many [men view their women data science counterparts as inferior](#), even if they are just as qualified and just as competent.

In contrast, research suggests that women in data science are more likely to support one another and create an inclusive and friendly environment.

Find out if you have a problem by conducting an anonymous workplace survey. Diversity and inclusion training led by HR can help address these issues. Employees can go through a sensitization program to make them aware of how their actions can create a harmful work environment and affect women's morale.

In addition, talk to the women who are leaving. During exit interviews, ask targeted questions about examples of negative team spirit or behaviors that may have led to them feeling discouraged about their work because of their gender.

“There’s a strong stereotypical image of a data scientist deeply ingrained in our minds, and it becomes difficult for women to fit into this image and even harder to prove their competence. We can remove these stereotypes by highlighting authentic female role models in business today.”

—Christelle Young, Chief Strategy and Analytics Officer, L’Oréal ANZ

Discrimination against mothers

[Forty-two percent of working women in the US](#) have faced some form of gender discrimination at the workplace, and data science is not immune to the issue.

The unequal treatment is frequently attributed to the perception that women often take time off from work for child and family care, and therefore don’t deserve equal pay and opportunity. In data science specifically, there is a misconception that taking breaks can make a data scientist outdated and irrelevant, and this belief affects women more than men due to other confounding factors.

Formal and stringent policy changes are needed to overcome this crucial roadblock. Performance appraisals should clearly be based on outcomes and targets achieved, not just managerial perception and recommendation. Clear metrics and KPIs against which everyone can be evaluated can help eliminate gender bias.

“Clients nowadays are very aware and want diversity, and for them in many cases it is unacceptable if you can’t provide that. They may also feel that you are, in fact, simply not managing your team well and that it lacks a much-needed diversity of thought. More and more people now believe that women in the workforce enhances the quality of output.”

—Rhiannon Thomas, Partner, Consumer Industry & Retail Practice, Kearney

Creating a better society powered by data science

Katherine Bouman and her algorithm recently made history for displaying the first image of a black hole. This moment was exciting for its scientific relevance, as well as for what it meant for women in STEM.

Slowly but steadily, we’re moving toward a world where the contributions of women are being properly recognized in data science and beyond.

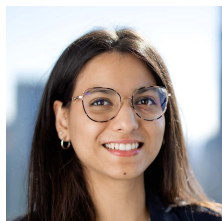
Corporate and data science leaders must lead the way in making big changes in how we all work to grant women a level playing field. These changes will ultimately benefit the organization, by raising the quality of the business output and the revenue.

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