AI could perpetuate gender inequality through inherent bias

By Saurabh Kumar   1 Oct 2019

Gender equality is one of the 17 goals identified by the United Nations (UN) as critical in creating a sustainable future. The UN aims for its Sustainable Development Goals to be realised by 2030. The reality, however, is that the world has a long way to go in achieving this goal in particular.

Gender inequality is hard-coded into everything from the way laws are structured to the language we use, and therein lies a significant problem. Technology, specifically that which involves artificial intelligence (AI), has the potential to perpetuate or even worsen gender inequality. This problem needs to be addressed as a matter of urgency before it is too late.

Saurabh Kumar, CEO at In2IT Technologies South Africa

Ongoing disparity around the world

Gender discrimination is still part of the law of many countries. In Melinda Gates' book *A Moment of Lift*, she highlights several statistics around gender equality across the globe: there are 113 countries that do not have laws to ensure equal pay for equal work among men and women; 104 countries make certain jobs off-limits for women; 39 countries have laws that mean a daughter cannot inherit the same proportion of assets as a son; 36 countries limit what wives can inherit from their husbands; 29 countries restrict the hours women can work; 18 countries allow men to prohibit their wives from working; and 17 countries limit when and how women can travel outside the home. It is clear that the laws of many countries are holding women back from empowerment.

Even in more liberal nations there is significant disparity that still exists. For example, the way South Africa's society is structured continues to position men as superior to women. According to an article in the *City Press*, "Feminist scholars and gender activists agree that an ideal equal society will remain a dream until gender power relations shift in politics, the economy and society." However, it is not only politics that is preventing true gender equality from being realised. Technology also plays a role in gender disparity.

The technology gap

One of the biggest issues with technology is that historically men have always had greater access to technology than

women, which places women at a disadvantage in a technology-driven world. This, in turn, creates a gap in education, as women are less exposed to career paths involving technology pursuits. Women are underrepresented in the fields of science, technology, engineering and mathematics (STEM) because these are traditionally considered to be male pursuits. While this is slowly changing, the STEM fields are distinctly male-dominated around the world. This inequality is even greater in so-called third world countries and more distinct as you move into the rural areas, where women are discouraged from having careers in the first place, and access to technology and education around it is limited.

The problem with AI

The issue with technology goes further than this, however. AI and machine learning are becoming more prevalent, but due to the aforementioned underrepresentation of women in STEM, the vast majority of programming around these technologies is being performed by men. AI and machine learning are known to be prone to inherent bias, as they 'learn' from the data they are given. If the data they are learning from incorporates gender-biased information then this bias will feed on itself and grow. If robotic processes are developed by men and technology is taught to 'think' by men, it is almost inevitable that the answers they give or the behaviours they exhibit will be biased toward men. This could potentially perpetuate the gender equality gap and even cause it to worsen.

Solving the issue before it is too late

It is predicted that in the future, more than a third of tasks performed today will be taken over by bots. Not only does this mean that many tasks in the future have the potential to be inherently male-biased but it also means that in order to be employable people need to develop new skills. If women are not included in technology they will become further economically marginalised, and without education around and access to technology they will be unemployable in the future world. The only solution is to increase the number of women involved technology, specifically in the development and programming of AI and robotic processing technologies.

In rural areas, women often have no access to education, which means that opportunities are lacking from the outset. Basic education needs to be addressed to ensure that populations, including women, are connected to and taught how to use and interact with technology. Beyond that, corporates need to realise that there remains a significant gender equality gap within the tech space and they need to develop initiatives to bring women into the workplace and upskill them. It is imperative to provide digital training for women, including cyber skills.

For technology-focused organisations, in particular, the focus should be around encouraging and upskilling women in technologies such as AI, robotics and natural language processing. To prevent a potential perpetuation of gender inequality through technology, women need to be actively encouraged and skilled to develop AI-based solutions.

ABOUT THE AUTHOR

Saurabh Kumar, CEO at In2IT Technologies South Africa