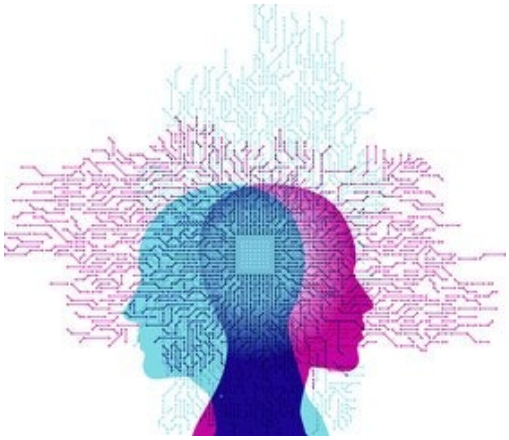
AI AND THE FUTURE OF WORK



GETTY IMAGES

While no one knows what artificial intelligence's effect on work will be, we can all agree on one thing: it's disruptive. So far, many have cast that disruption in a negative light and projected a future in which robots take jobs from human workers.

That's one way to look at it. Another is that automation may create more jobs than it displaces. By offering new tools for entrepreneurs, it may also create new lines of business that we can't imagine now.

A recent study from Redwood Software and Sapio Research underscores this view. Participants in the 2017 study said they believe that 60 percent of businesses can be automated in the next five years.

On the other hand, Gartner predicts that by 2020 AI will produce more jobs than it displaces. Dennis Mortensen, CEO and founder of x.ai, maker of AI-based virtual assistant Amy, agreed. "I look at our firm and two-thirds of the jobs here didn't exist a few years ago," said Mortensen.

In addition to creating new jobs, AI will also help people do their jobs better — a lot better. At the World Economic Forum in Davos, Paul Daugherty, Accenture's Chief Technology and Innovation Officer summed this idea up as, "Human plus machine equals superpowers."

For many reasons, the optimistic view is likely the more realistic one. But AI's ability to transform work is far from preordained. In 2018, workers are not being adequately prepared for their futures. The algorithms and data that underlie AI are also flawed and

don’t reflect the diverse society it’s meant to serve.

How AI Could Grow Jobs: Inventing New Ones, Empowering Existing Ones

While AI will certainly displace some jobs, such displacement has occurred long before AI was on the scene. In the past century, we’ve seen the demise or diminishment of titles like travel agent, switchboard operator, milkman, elevator operator and bowling alley pinsetter. Meanwhile, new titles like app developer, social media director, and data scientist have emerged.

Daugherty and Jim Wilson, managing director of Information Technology and Business Research at Accenture Research have co-authored a book titled Human+Machine: Reimagining Work in the Age of AI. In their view, future (and current) jobs include trainers and explainers. Trainers will teach AI systems how to perform and mimic human behaviors. Explainers will liaise between machines and human supervisors.

Trainers

Chatbots have recently emerged as a new communications conduit for brands and consumers. It’s no secret though that they have often been stiff and offered inappropriate responses. For instance, we might say “It’s raining again. Great,” and humans would recognize the sarcasm. A machine wouldn’t.

Understanding language is one component of perfecting chatbots. Another is empathy. A new wave of startups is injecting the emotional intelligence into chatbot-based communication.

Eugenia Kuyda, cofounder of Replika, said empathetic chatbots like hers rely on human trainers. “In the future I think one of the most interesting areas of knowledge will be knowing human behavior and psychology,” she said. “You have to build chatbots in a way that makes people happy and want to achieve their goals. Without a certain amount of empathy, it’s not going to happen.”

In addition, companies like Facebook and Google use humans to moderate content. Facebook currently employs around 7,500 people for this purpose. Google parent company Alphabet also recently said it planned to have 10,000 people moderating YouTube content.

Explainers

Trainers bring a human element to AI systems, but “explainers” will bridge the gap between the new systems and their human managers.

C-suite executives, for instance, will be uneasy about basing decisions on “black box” algorithms. They will need explanations in plain English — delivered by a human — to ease their concerns.

Legislation is another impetus. The European Union’s General Data Protection Regulation, which goes into effect this year, includes the “right to explanation.” That means consumers can question and fight any decision made on an algorithmic base that affects them

Such explainers will perform “autopsies” when the machines make mistakes. They will also diagnose the error and help to take steps to avoid similar mistakes in the future.

Empowering Workers, Businesses and Industries

Rather than replacing workers, AI can be a tool to help employees work better. A call center employee, for instance, can get instant intelligence about what the caller needs and do their work faster and better. That goes for businesses and industry too. In another example, in life sciences, Accenture is using deep learning and neural networks to help companies to bring treatments to market faster.

In addition to helping existing businesses, AI can create new ones. Such new business include digital-based elder care, AI-based agriculture and AI-based monitoring of sales calls.

Finally, automation can be used to fill currently unfilled jobs. As Daugherty noted recently, there is a shortage of 150,000 truck drivers in the U.S. right now. “We need automation to improve the productivity of the drivers, the lifestyle of the drivers to attract more people to the industry,” he said.

Changes We Need To Make Today

It will likely take a decade or so until some AI technologies become the norm. While that provides plenty of lead time for the transition, few companies are taking action now to train their workers. Another little-noticed problem is that the AI systems themselves are being created with data and algorithms that don’t reflect the diverse American society.

Regarding the former, Accenture research shows business leaders don't think that their workers are ready for AI. But only 3% of those leaders were reinvesting in training. At a Davos meeting held by Accenture, Fei-Fei Li, an associate professor at Stanford University and director of the school's AI lab, suggested using AI to retrain workers. "I think there's a really exciting possibility that machine learning itself would help us to learn in more effective ways and to re-skill workers in more effective ways," she said. "And I personally would like to see more investment and thought going into that aspect."

Another issue to address in 2018 is the lack of diversity among the companies creating AI. As Li noted, this lack of diversity "is a bias itself." Recent research from MIT has underscored this point. MIT Media Lab researcher Joy Buolamwini said she found evidence that facial recognition systems recognizing white faces better than black faces. In particular, the study found that if the photo was of a white man, the systems guessed correctly more than 99 percent of the time. But for black women, the percentage as between 20 percent and 34 percent. Such biases have implications for the use of facial recognition for law enforcement, advertising and hiring.

As such research illustrates, AI may present itself as an alien force of disruption, but it's actually a human invention that reflects its creator's flaws and humanity. "The effect of AI on jobs is totally, absolutely within our control," Cathy Bessant, chief operations and chief technology officer, Bank of America, said in her Davos chat. "This isn't what we let AI do to the workforce, it's how we control its use to the good of the workforce."

This story was produced by the WIRED Brand Lab for Accenture.