

Artificial intelligence imperils India Inc jobs

Automation threatens 69% of the jobs in India. | Photo Credit: [Reuters](#)

When Vishal Sikka, the then CEO of Infosys and the now the vice-chairman, arrived in a driverless golf cart at the firm's Bengaluru Campus recently, it showed the world how artificial intelligence or AI may become the new world order in the years to come.

The software, 'driving' the cart, had been developed by Infosys together with IIT-Delhi. The vehicle can be used on a pre-determined route.

"This is an example of the kind of things we are using to teach our employees," said Mr. Sikka. "We built the autonomous systems in the cart to teach our employees to build autonomous driving technology."

Technology leaders are drumming up the thought that the emergence of new technologies such as artificial intelligence (AI) and automation are going to be the new drivers of employment, especially for India's \$150 billion information technology (IT) industry that now employs about four million people.

Over the past two years, Bengaluru-based Infosys, which crossed a revenue of \$10.2 billion in the 2016-17 fiscal, has revamped the way it trains staff. Last quarter, the company completed training 3,000 people in AI technologies. "We are training our existing employees for these new skills," said Mr. Sikka. He said with the advances in automation technology, more 'commoditised' jobs were going away and one had to move towards next-generation jobs and new areas of opportunities. In April, the firm also released next generation AI platform, Nia which, it said, tackles business problems such as forecasting revenues and understanding customer behaviour. The other applications include deeply understanding the content of contracts and legal documents, understanding compliance and fraud.

Several miles away from the Infosys campus in Electronics City, former U.S. chief data scientist D.J. Patil, along with tech entrepreneur Nandan Nilekani, expressed concern over the impact of AI and automation on the jobs in the country, during a fireside chat event. Mr. Patil said in India, though there were large IT players, certain types of coding jobs were specially developed towards software testing or heavily around small, added features such as upgrading. "I am very concerned that those are the jobs that are going to be replaced by automated processes," said Mr. Patil in an interview.

The first chief data scientist to the U.S. Government, appointed by the Obama Administration, advised young professionals to prepare and train themselves in new technologies in areas such as artificial intelligence, cybersecurity and healthcare.

Mr. Nilekani, who spearheaded India's massive unique identification project, emphasised that young professionals needed to prepare for life-long learning and not be dependent on just getting a degree for the sake of employment. "Things are changing and... changing very rapidly," said Mr. Nilekani. "The future is life-long learning, anytime, anywhere learning."

Automation threatens 69% of the jobs in India, while it's 77% in China, according to a World Bank research.

"If it (automation) is not planned well and addressed holistically, it is a disaster in the making," said K.R. Sanjiv, chief technology officer of IT services firm Wipro, during a discussion on the 'rise of

machines and future of human labour' at a recent event organised by the Confederation of Indian Industry (CII) in Bengaluru.

"There is no doubt about that. It is going to affect 60%-70% of the current jobs. They will either get marginalised or totally eliminated," he said adding the transition will happen in a decade and not in 50 or 100 years.

This month, the company revealed that its strategic investment arm, Wipro Ventures, had invested an undisclosed amount in Vienna, Austria-based firm Tricentis. The firm offers a range of products and services to help companies automate testing of their software.

Indeed, India's IT services industry is set to lose 6.4 lakh low-skilled positions to automation by 2021, according to U.S.-based HfS Research. It said this was mainly because there were a large number of non-customer facing roles at the low-skill level in countries like India, with a significant amount of "back office" processing and IT support work likely to be automated and consolidated across a smaller number of workers.

According to online professional training company Simplilearn, the era of digitisation and automation will create newer career choices for IT professionals. The new job roles that will dominate the IT workforce are within digital domains such as big data, artificial intelligence, Internet of Things (IoT), cloud computing and cybersecurity, according to the report "How Automation is Changing Work Choices: The Future of IT Jobs in India" released this month by Simplilearn.

"While there is a risk to jobs due to these trends, the good news is that a huge number of new jobs are getting created as well in areas like cybersecurity, cloud, big data, machine learning and AI," said Kashyap Dalal, chief business officer, Simplilearn, in a statement. "It is clearly a time of career pivot for IT professionals to make sure they are where the growth is."

The impact of automation is not just limited to the country's information technology industry but other areas as well such as agriculture. Tata Group is exploring use of automation to improve the lives of the workforce and bring in efficiency. Piyush Mishra, technology leader — food security, Tata Services, said that the group was working on a precision agriculture technology where an unmanned aerial vehicle or a drone can be used for aerial spraying on farms.

"We wanted to see the challenges faced by farmers," he said. "In addition to labour, it (spraying) has multiple impacts on farmer life — from health to efficiency and productivity," said Mr. Mishra at the CII event. He said that Tata was also working in the area of soft-robotics, where, instead of using traditional robots, wearables and other techniques can be leveraged not to replace the workers on the factory floor but to assist them. "For example, enabling labourers to do more strenuous jobs with fewer energy inputs," said Mr. Mishra.

Companies like Skylark Drones, a Bengaluru-based startup is providing its unmanned aerial vehicles to enterprises for services such as land surveying, power line inspection and monitoring of construction, pipelines and crop health. "You can access places which you couldn't enter earlier. You don't have to put humans in situations which are life threatening," said Mrinal Pai, co-founder, Skylark Drones, at the CII event. His co-panelist Arati Deo, managing director, Artificial Intelligence at professional services company, Accenture, said the need of the hour was planning ahead and making sure the talent pool has the skills that would be needed "as these systems (AI, automation) evolve."

The service is available in Bengaluru, Kolkata and Chennai, operating 500 bicycles

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Indian Democracy: Different strokes, different notes

Last week Indian democracy hit a new high and plumbed a new low. That this mix of good and bad happened just days after the anniversary of India's 70th year of independence was coincidental no doubt, but also served as a timely reminder on the importance of hanging on to the democratic principles bequeathed by the founding fathers.

The good news is that Indian democracy is very much alive and vibrant, but the bad news is that the country still has a long way to go.

First the Supreme Court unambiguously ruled in the instant triple talaq case that law prevails over faith. And then, a nine-judge constitution bench delivered what is probably one of the most seminal unanimous judgements, by ruling that privacy is a fundamental right under the Constitution of India. The two together stamped a new benchmark for the world's largest democracy, creating a new basis for its further enrichment.

Unfortunately, the country's social order failed itself in the very first test. Just a few days later the conviction of Dera Sacha Sauda chief and self-styled godman Gurmeet Ram Rahim Singh for raping and sexually exploiting two disciples unleashed a violent reaction.

Undoubtedly the administration of Manohar Lal Khattar was caught napping and should be duly blamed (something that is becoming a habit, given the anarchy that flourished last year in Haryana after the Jat community took to the streets to demand reservations), but the larger social message was not missed—the protesters did not care for the rule of law. The violence was an utter travesty of the path-breaking ideas underlying the two judgements.

There are two ways to look at these tumultuous events: either as a half-empty or a half-full cup. The former is a cynical pursuit. If one views it in the latter perspective, then there are indeed many positives to be drawn from the events of last week.

First, obviously, Indian democracy has made huge strides in the last seven decades but it is still some distance from embracing the rule of law. It should be a moment of pause for the country and its polity as to why even after 70 years of democratic governance exceptionalism triumphs; the IOU politics which has fostered vote banks based on caste and religion are now beginning to haunt the nation as it strives to transition to a rules-based society.

Second, in the majority verdict in the instant triple talaq case the Supreme Court found the practice to be violative of the fundamental right under Article 14 (equality before law) of the Constitution of India. It has very unequivocally upheld the rule of law over faith.

In the process, the apex court has created room for a national debate on personal law cutting across religions focusing on the inevitable gender bias they propagate, sending a clear message for politicians to rise above their partisan positions. As Pratap Bhanu Mehta, vice-chancellor of Ashoka University, pointed out in his column last week published in *The Indian Express*, Parliament has always avoided a debate on this prickly subject. "The big question is," as Mehta rightly asks, "Is it now possible for our politics to calmly discuss issues of personal law reform and gender justice across all communities without communalising our politics?"

Third, in the big decision on privacy, the apex court has once again shown amazing courage as well as foresight. Not only did it overrule its own previous judgement which paved the way for imposition of emergency and confiscation of social freedoms, but it also placed the ongoing privacy debate in a very contemporary context recognizing that pervasive technology has blurred

the line between what is private and what is not.

Unlike the takeaways articulated by a section of misguided privacy warriors who reduced the verdict to an indictment of their pet hate—Aadhaar or the unique identity programme of the government—the judgement has provided unprecedented width and depth to the idea of privacy. It has, on the one hand, candidly acknowledged the need of any modern state to extract personal data, but at the same unequivocally held that every individual has a right to privacy—this can only be transgressed in exceptional circumstances and the enabling law will have to meet the standard of a “fair, just and reasonable” procedure.

In the final analysis, it is clear that the apex court has provided the wherewithal for India to undertake a welcome makeover of Indian democracy. It is now entirely up to the people of India. The violence in Panchkula is a grim reminder of the costs of a bad choice.

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