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# Job Boom in India for People Training A.I. to Do Jobs People Typically Do

## Data Annotators Help Bots Recognize Patterns And Make Decisions

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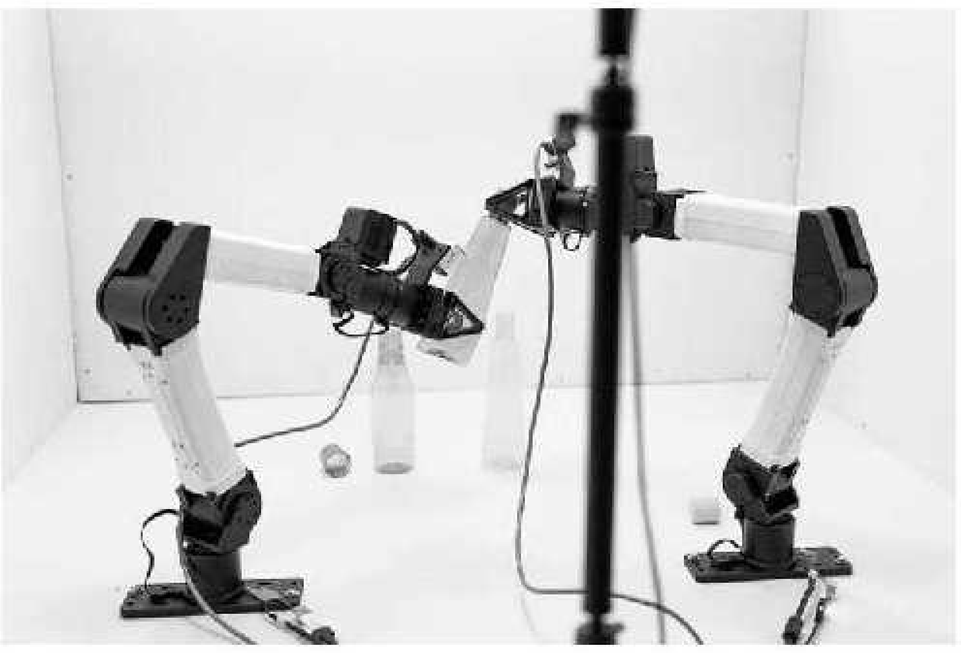
PHOTOGRAPHS BY ANINDITO MUKHERJEE FOR THE NEW YORK TIMES

A contractor recording her daily activities at home in Karur with a smartphone strapped to her head. Below, the Objectways office in Coimbatore, and robotic arms being put through their paces. In the fast-growing field of data annotation, workers help A.I. to improve how it performs tasks traditionally done by people.



KARUR, India — Evidence of the artificial intelligence boom often looks like the squat, windowless data centers that house acre after acre of hardware. But near the southern tip of India, the city of Karur is teeming with signs of A.I.'s ascendancy in human form.

Hundreds of tech lab workers clog the streets on coffee breaks late on any given weekday afternoon — men and women in their 20s, corporate ID cards dangling from lanyards around their necks. Others work a few hours a weekend from home, supplementing their income by strapping iPhones to their heads and pressing record while they chop vegetables or make the bed.

They work in a fast-growing field of A.I. called data annotation, which — for the moment, at least — requires a human touch. As the sentient backstop for artificial intelligence, data annotators help fix bugs and find blind spots in A.I. models, improving and refining the programs that steer your car, automate an assembly line and track inventory in retail stores.

The work can be rote and less complex than what engineers train for in college, requiring hours in front of a screen to examine video frame by frame. But as A.I. capabilities change how companies design and produce products — making jobs like coding disappear for college graduates — data annotation is showing how countries like India, with entry-level job shortages and large youth populations, are adapting.

Aiswarya Palaniswamy, a 25-year-old with a master's degree in data analytics, found a job last year with the Karur-based Objectways Technologies, a data-annotation firm whose clients are mainly American companies using A.I. in their products. Objectways employs 2,600 people — 300 of whom were hired in the last month.

"There will always be data. There will always be information," Ms. Palaniswamy said, sounding confident she had found a job that would be resilient at a time when A.I. has automated jobs like payroll and data entry that workers in India used to fill. She and her co-workers watch footage from products in the rapidly expanding physical A.I. space, including self-driving cars and humanoid robots, and note in each frame how well the A.I. model is performing its task.

Objectways' skilled entry-level office jobs pay around $210 to $260 a month — a comfortable salary in a small Indian city like Karur, with around 440,000 people. The unskilled work of recording yourself at home pays $2.50 an hour for usable footage and is done on a freelance basis.

In India, finding steady employment for a rapidly growing population of young adults — some 2 million Indians turn 18 each month — is particularly pressing for Prime Minister Narendra Modi and his governing Bharatiya Janata Party.

The lack of opportunity for young people was an animating impulse behind the "cockroach" protests over education that erupted last month. Mr. Modi, who has promised to lead India into a golden era of prosperity and modernization, offered a rare concession and replaced his education minister. But the underlying anger over the lack of skilled jobs for graduates is not so easy to resolve.

While data-annotation companies like Objectways do much of their work for companies outside of India, the Modi government would rather see homegrown A.I. businesses developing their own applications so the economic impact is greater.

S. Krishnan, who leads the country's information and technology ministry, said in an interview that India has an opportunity to deploy its biggest resource — its 1.4 billion people — in the parts of the A.I. economy where a particular kind of human knowledge is necessary. That can involve jobs such as translating the many languages spoken in India or monitoring patients in an intensive care ward, both of which are being done by Indian companies today, he said.

India should avoid adding too many A.I. jobs that could go away just as the back-office jobs did, Mr. Krishnan added, saying, "We have to look for higher-value-added jobs." Up to 1.5 million jobs in information and technology services could disappear because of disruption from A.I., according to a 2025 report from a government think tank.

The range of activities that artificial intelligence can make more efficient is vast. So are the entrepreneurial opportunities.

Puneet Jindal, chief executive and founder of Labellerr, a data-annotation company in the state of Punjab, said that as A.I. begins to power more products in the office and at home, there will be greater need for data from diverse populations, collected in many languages.

"India is one of the most diverse countries on planet Earth, and people have so many different ways of working," Mr. Jindal said. "The kind of scale you can get from India is phenomenal."

That is especially true in the emerging market for robotic devices designed to complete tasks humans do themselves today.

At Objectways' labs in Karur, where two New York Times reporters visited in July, many workers spend their days annotating data for a humanoid robot designed to perform household chores. Other projects include work on a device that can help blind people by telling them what their surroundings look like.

One recent morning, a worker in a test kitchen operated a pair of robotic pincers with cameras attached to them so Objectways could record and then analyze video of how they performed various household tasks — picking up plates, unscrewing the top of a water bottle and pouring its contents into a cup, arranging food. Employees repeated these tasks in Objectways' test bathroom and bedroom.

> **'India is the back office for the world no longer.'**
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> RAVI RAJALINGAM, founder of Objectways, a data-annotation and AI services company.

"We are giving the robot the data and saying 'learn from this,'" said Ravi Rajalingam, the founder and chief executive of Objectways.

He became interested in the field after working with a lending company to streamline its application process with A.I. He started Objectways in his hometown, Karur, in 2019, seeing an opportunity to put recent graduates to work. His wife hired their first 20 employees, he said.

"India is the back office for the world no longer," Mr. Rajalingam said. He acknowledged that many of his positions do not require engineering degrees, but added, "It is technical, and they can learn about models of A.I." Many employees work their way up the ladder, he said.

Mohamed Afsar, 29, has been promoted and now oversees 600 employees working on projects at the company's offices in Coimbatore, a larger city about two and a half hours west of Karur. "It's an immense process and we need a huge work force," he said.

Mr. Afsar, who grew up nearby and was the first person in his family to attend college, said that 200 people can process 70 hours of video a day of robots at work or from a self-driving car. That is still short of what he needs to analyze the 1,000 hours of video that come in from the company's clients every day.

Analysts estimate that data annotation will contribute up to $10 billion to India's economy by the end of the decade. But it is still too small a business to convince economists and policymakers that it will give India a meaningful edge to catch up in the A.I. race.

Some of Asia's biggest economies were slow to invest in A.I. India in particular — described in one Morgan Stanley report as a "laggard" — did not commit to its first considerable A.I. development initiative until 2024, when the government announced a $1.25 billion, five-year plan. The slow start meant India had less of a cushion to absorb the tech jobs it lost because A.I. made them obsolete.

At Objectways, the new hires seem content for now being the humans who help with a dutiful but vital part of the process.

Hari Prasad, 25, said that when he graduated with an engineering degree last year, he did not imagine his work would include something resembling science fiction.

"If someone had told me that 10 years down the road a robot would be bringing you coffee, I wouldn't have believed them," he said.

But his job today is to help make sure that actually happens. "We need a man to train the robot," he said with a smile.

Ravi Rajalingam, second left, of Objectways saw A.I.'s potential after helping a lending firm streamline applications.