

# Do we need humans for that job?

## Automation booms after COVID

September 5 2021, by Matt O'brien and Paul Wiseman

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Baylee Bowers pays for her lunch using her cell phone at Bartaco in Arlington, Va., on Thursday, Sept. 2, 2021. The restaurant is using an automated app for ordering and payments. Instead of servers they use "food runners" to get orders to tables. "I like it," says Bowers of the automation, "it was easy. I'm a flight attendant so as long as automation doesn't come for my job I'm ok with it." Credit: AP Photo/Jacquelyn Martin

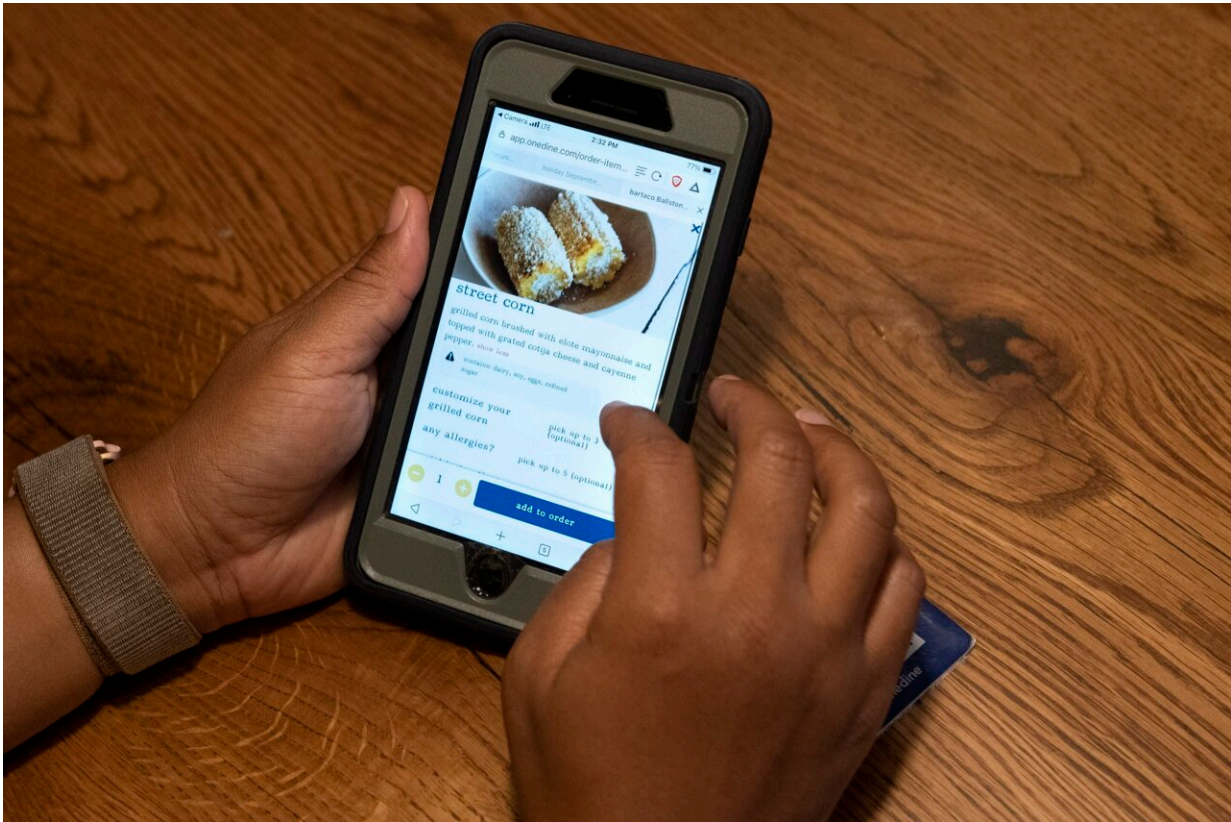
Ask for a roast beef sandwich at an Arby's drive-thru east of Los Angeles and you may be talking to Tori—an artificially intelligent voice assistant that will take your order and send it to the line cooks.

"It doesn't call sick," says Amir Siddiqi, whose family installed the AI voice at its Arby's franchise this year in Ontario, California. "It doesn't get corona. And the reliability of it is great."

The pandemic didn't just threaten Americans' health when it slammed the U.S. in 2020—it may also have posed a long-term threat to many of their jobs. Faced with worker shortages and higher labor costs, companies are starting to automate service sector jobs that economists once considered safe, assuming that machines couldn't easily provide the human contact they believed customers would demand.

Past experience suggests that such automation waves eventually create more jobs than they destroy, but that they also disproportionately wipe out less skilled jobs that many low-income workers depend on. Resulting growing pains for the U.S. economy could be severe.

If not for the pandemic, Siddiqi probably wouldn't have bothered investing in new technology that could alienate existing employees and some customers. But it's gone smoothly, he says: "Basically, there's less people needed but those folks are now working in the kitchen and other areas."



A diner at Bartaco uses their app to order an item off the menu, at the restaurant in Arlington, Va., on Thursday, Sept. 2, 2021. The restaurant is using an automated app for ordering and payments. Instead of servers they use "food runners" to get the food to the tables. Credit: AP Photo/Jacquelyn Martin

Ideally, automation can redeploy workers into better and more interesting work, so long as they can get the appropriate technical training, says Johannes Moenius, an economist at the University of Redlands. But although that's happening now, it's not moving quickly enough, he says.

Worse, an entire class of service jobs created when manufacturing began to deploy more automation may now be at risk. "The robots escaped the manufacturing sector and went into the much larger service sector," he



says. "I regarded contact jobs as safe. I was completely taken by surprise."

Improvements in robot technology allow machines to do many tasks that previously required people—tossing pizza dough, transporting hospital linens, inspecting gauges, sorting goods. The pandemic accelerated their adoption. Robots, after all, can't get sick or spread disease. Nor do they request time off to handle unexpected childcare emergencies.

Economists at the International Monetary Fund found that past pandemics had encouraged firms to invest in machines in ways that could boost productivity—but also kill low-skill jobs. "Our results suggest that the concerns about the rise of the robots amid the COVID-19 pandemic seem justified," they wrote in a January paper.



Baylee Bowers works on her computer after ordering and paying for her meal using her cell phone at Bartaco in Arlington, Va., on Thursday, Sept. 2, 2021. The restaurant uses an automated app for ordering and payments. Instead of servers they use "food runners" to get orders to tables. Credit: AP Photo/Jacquelyn Martin

The consequences could fall most heavily on the less-educated women who disproportionately occupy the low- and mid-wage jobs most exposed to automation—and to viral infections. Those jobs include salesclerks, administrative assistants, cashiers and aides in hospitals and those who take care of the sick and elderly.

Employers seem eager to bring on the machines. A survey last year by the nonprofit World Economic Forum found that 43% of companies planned to reduce their workforce as a result of new technology. Since the [second quarter](#) of 2020, business investment in equipment has grown 26%, more than twice as fast as the overall economy.

The fastest growth is expected in the roving machines that clean the floors of supermarkets, hospitals and warehouses, according to the International Federation of Robotics, a trade group. The same group also expects an uptick in sales of robots that provide shoppers with information or deliver room service orders in hotels.

Restaurants have been among the most visible robot adopters. In late August, for instance, the salad chain Sweetgreen announced it was buying kitchen robotics startup Spyce, which makes a machine that cooks up vegetables and grains and spouts them into bowls.



Patrons eat on the patio at Bartaco in Arlington, Va., on Thursday, Sept. 2, 2021. The restaurant uses an automated app for ordering and payments, accessed via a barcode attached to the table, and instead of servers they use "food runners" to get the orders to the tables. Credit: AP Photo/Jacquelyn Martin

It's not just robots, either—software and AI-powered services are on the rise as well. Starbucks has been automating the behind-the-scenes work of keeping track of a store's inventory. More stores have moved to self-checkout.

Scott Lawton, CEO of the Arlington, Virginia-based restaurant chain Bartaco, was having trouble last fall getting servers to return to his restaurants when they reopened during the pandemic.



So he decided to do without them. With the help of a software firm, his company developed an online ordering and payment system customers could use over their phones. Diners now simply scan a barcode at the center of each table to access a menu and order their food without waiting for a server. Workers bring food and drinks to their tables. And when they're done eating, customers pay over their phones and leave.

The innovation has shaved the number of staff, but workers aren't necessarily worse off. Each Bartaco location—there are 21—now has up to eight assistant managers, roughly double the pre-pandemic total. Many are former servers, and they roam among the tables to make sure everyone has what they need. They are paid annual salaries starting at \$55,000 rather than hourly wages.



After they ordered on an app via a barcode attached to the table, Bjanko Zeqiri, a food runner at Bartaco, brings their lunches to restaurant patrons as they sit on the patio at Bartaco, in Arlington, Va., on Thursday, Sept. 2, 2021. The restaurant is using an automated app for ordering and payments. Instead of servers Bartaco uses "food runners" to bring the orders to the tables. Credit: AP Photo/Jacquelyn Martin

Tips are now shared among all the other employees, including dishwashers, who now typically earn \$20 an hour or more, far higher than their pre-pandemic pay. "We don't have the labor shortages that you're reading about on the news," Lawton says.

The uptick in automation has not stalled a stunning rebound in the U.S. jobs market—at least so far.

The U.S. economy lost a staggering 22.4 million jobs in March and April 2020, when the pandemic gale hit the U.S. Hiring has since bounced back briskly: Employers have brought back 17 million jobs since April 2020. In June, they posted a record 10.1 million job openings and are complaining that they can't find enough workers.

Behind the hiring boom is a surge in spending by consumers, many of whom got through the crisis in unexpectedly good shape financially—thanks to both federal relief checks and, in many cases, savings accumulated by working from home and skipping the daily commute.





Drinks surround a barcode attached to the table at Bartaco, that patrons use to order and pay at the restaurant in Arlington, Va., on Thursday, Sept. 2, 2021. The restaurant uses an automated app for ordering and payments. Instead of servers Bartaco uses "food runners" to bring the orders to the tables. Credit: AP Photo/Jacquelyn Martin

Mark Zandi, chief economist at Moody's Analytics, expects employers are likely to be scrambling for workers for a long time.

For one thing, many Americans are taking their time returning to work—some because they're still worried about COVID-19 health risks and childcare problems, others because of generous federal unemployment benefits, set to expire nationwide Sept. 6.

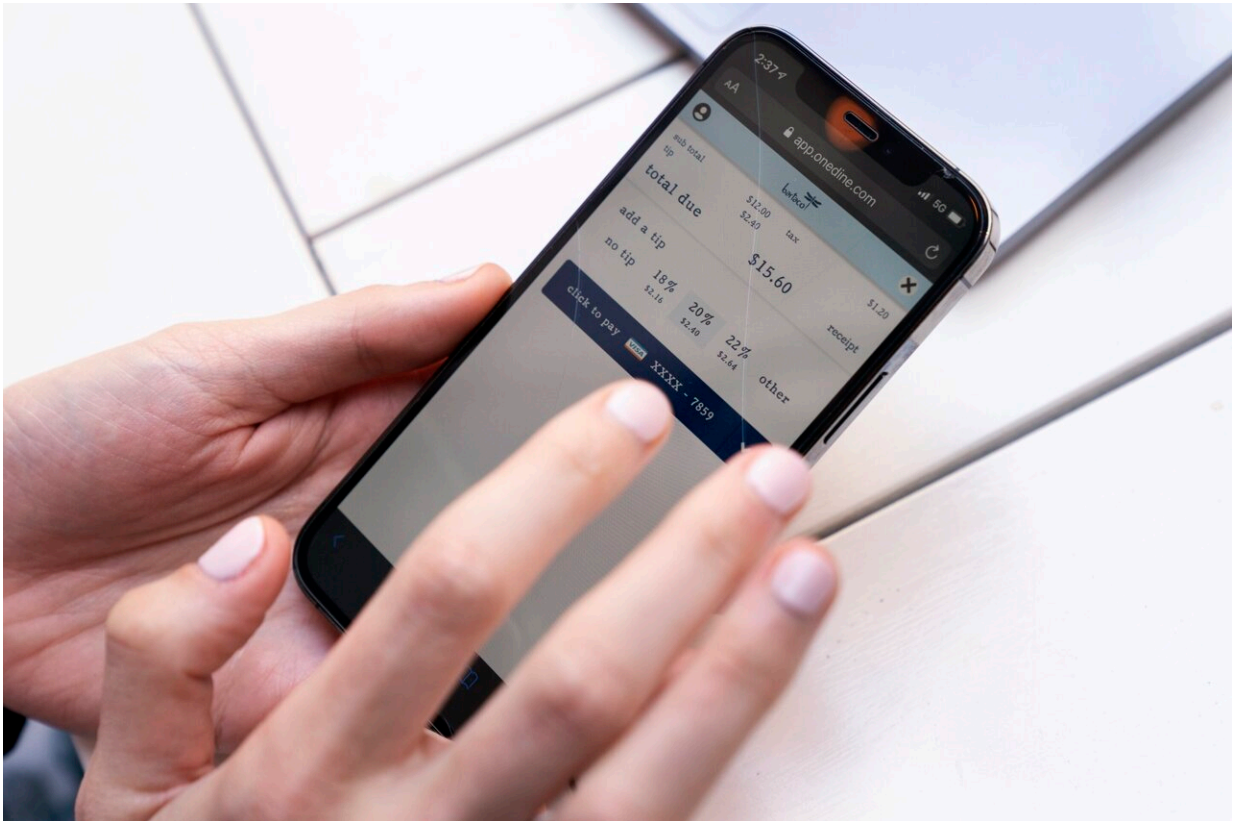
In addition, large numbers of Baby Boom workers are retiring. "The labor market is going to be very, very tight for the foreseeable future," Zandi says.

For now, the short-term benefits of the economic snapback are overwhelming any job losses from automation, whose effects tend to show up gradually over a period of years. That may not last. Last year, researchers at the University of Zurich and University of British Columbia found that the so-called jobless recoveries of the past 35 years, in which economic output rebounded from recessions faster than employment, could be explained by the loss of jobs vulnerable to automation.



Brad Lavelle, a shift lead at Bartaco, works the from desk at the restaurant in Arlington, Va., on Thursday, Sept. 2, 2021. The restaurant uses an automated

app for ordering and payments, accessed via a barcode attached to tables, and instead of servers they use "food runners" to get the orders to the tables. Credit: AP Photo/Jacquelyn Martin



Baylee Bowers adds a tip while paying for her lunch using her cell phone at Bartaco in Arlington, Va., on Thursday, Sept. 2, 2021. The restaurant is using an automated app for ordering and payments. Instead of servers they use "food runners" to get orders to tables. "I like it," says Bowers of the automation, "it was easy. I'm a flight attendant so as long as automation doesn't come for my job I'm ok with it." Credit: AP Photo/Jacquelyn Martin

Despite strong hiring since the middle of last year, the U.S. economy is



still 5.3 million jobs short of what it had in February 2020. And Lydia Boussour, lead U.S. economist at Oxford Economics, calculated last month that 40% of the missing jobs are vulnerable to automation, especially those in food preparation, retail sales and manufacturing.

Some economists worry that automation pushes workers into lower-paid positions. Daron Acemoglu, an economist at the Massachusetts Institute of Technology, and Pascual Restrepo of Boston University estimated in June that up to 70% of the stagnation in U.S. wages between 1980 and 2016 could be explained by machines replacing humans doing routine tasks.

"Many of the jobs that get automated were at the middle of the skill distribution," Acemoglu says. "They don't exist anymore, and the workers that used to perform them are now doing lower-skill [jobs](#)."

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Citation: Do we need humans for that job? Automation booms after COVID (2021, September 5) retrieved 14 December 2025 from <https://techxplore.com/news/2021-09-humans-job-automation-booms-covid.html>

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