‘Eat the future, pay with your face’: my dystopian trip to an AI burger joint

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On 1 April, the same day California’s new $20 hourly minimum wage for fast-food workers went into effect, a new restaurant opened in north-east Los Angeles that was conspicuously light on human staff. CaliExpress by Flippy claims to be the world’s first fully autonomous restaurant, using a system of AI-powered robots to churn out fast-food burgers and fries. A small number of humans are still required to push the buttons on the machines and assemble the burgers and toppings, but the companies involved tout that using their technology could cut labor costs, perhaps dramatically. “Eat the future,” they offer. I visited CaliExpress last week to find out what an all-American lunch served with a side of existential dread tastes like. When I entered the restaurant, located near Caltech university in Pasadena, I was greeted with giant posters advertising the “frying AI robot marvel”, but few actual customers. Most of the people inside were other journalists. A television crew hovered over the grill machine. The space was decorated with early prototypes of robot arms, as well as a riff on Michelangelo’s Sistine Chapel, with a human hand reaching out not to the hand of God, but to a robot claw holding french fries. I placed my order at a self-serve screen, where my robot-made cheeseburger and fries cost $15 plus tax. A sign urged me to “pay with my face”, offering me $10 to enroll with a company called PopID to link my face to my credit or debit card. “Pay with just a smile!” it urged. I did not. The burger joint is a collaboration between multiple companies using it as a “test kitchen” for the future of fast-food technology. The machine for making the burgers is produced by Cucina, a company focused on automating food production, which described its “BurgerChef” as a solution to a “65% increase in food service wages in the past 15 years”. The french fry-making robot, Flippy, was created by Miso Robotics, a local startup founded by a group of Caltech grads. I was offered a tour of the kitchen by Denise Koons, who works with PopID, the “biometric ordering” facial recognition company. She demonstrated the various stages of my order. She pushed a button on a nearby screen. The BurgerChef ground a single burger’s worth of wagyu steak to order and then squeezed it out from a tube and tucked it between two metal plates to brown. One hundred and ninety-five seconds later, a plastic arm rotated to receive the browned burger, ultimately dropping the meat into a waiting container. The BurgerChef was a large, boxy piece of equipment that felt no more threatening than a toaster oven, and was not particularly exciting to watch. Flippy, however, was the real star of the place, and absolutely terrifying. It was just humanoid enough to be disturbing, with one big, snake-like arm extending down from the ceiling, poised over a frying station protected behind a transparent window. Another press of a button, and the arm jerked up a waiting metal fry basket and maneuvered it to one side, where a predetermined amount of frozen potato slices tumbled down into the basket. Then Flippy dunked the basket into the sizzling oil, and we waited. Flippy was originally conceived as a grill-master robot that could flip burgers, hence the name, Rob Anderson, one of the co-founders of Miso Robotics,

told me later. But manning a grill – keeping track of burgers and cheese and buns and onions, and being able to flip the different objects at the proper time – turned out to be a tremendously sophisticated robotics problem, one too tricky for the startup to tackle, he said. So they decided to pivot to a simpler challenge: making a robot that could manage a frying station, what Anderson argued was “probably the most stressful and dangerous tasks in the kitchen” for human workers, and thus a good task for a robot, which would not be burned by hot oil or bothered by the heat. As I watched a giant metal arm encased in rubber pick up the fry basket again and shake it roughly, I had only one thought: the future of sex robots is going to be very unpleasant. What does AI actually do? It wasn’t clear to me how the restaurant differed from other robot-assisted operations, of which there are now many across California and the US. So I followed up with Anderson to find out how exactly AI was being put to use. He explained that Flippy’s AI components were designed for subtle and difficult tasks, such as adjusting to differently sized kitchens and ranges. It also had computer vision, a type of artificial intelligence that uses machine learning and neural networks to allow computers to act on visual inputs, like photos or videos, in the way that humans respond to sight. Flippy’s computer vision was continuously monitoring where the fry baskets were placed, so if a human worker replaced one in a slightly different spot, the machine would simply adjust. The robot wasn’t limited to french fries: it could also fry chicken wings and onion rings, and could detect when onions had been place inside the fryer, rather than potatoes, and adjust its fry times automatically, he said. Artificial intelligence also informed the robot’s “scheduling and forecasting” abilities, like deciding “what is the right order to cook all this food so it’s still cooked perfectly” during the lunch hour rush or slower times in the afternoon. Flippy was not designed to replace human workers completely, but to be a “tool” to make their work easier and safer, Anderson said. “It’s very much this collaborative setup,” he said, adding that working alongside robots would teach people “new skills” that are “more career growth oriented, rather than just learning how to cook french fries”. I asked Anderson what those skills would be, other than knowing how to push buttons. While Flippy’s interface was designed to be very simple, Anderson said, employees would have to master “how it works, how to clean it, how to keep it operating”, and how to get in touch with the robotics support line when it might need service or repairs. Flippy could not clean itself: it needed wipe-downs every night, and more intensive cleanings monthly and quarterly. Human employees could also do “more customer engagement work”, he said. “You don’t just have to sit there and monitor a fryer.” Flippy-style fryers were already at work in multiple locations of fast-food outlets including White Castle and Jack in the Box, Anderson told me: “We’ve got a fleet of robots out there.” Tasting the results So, after all the hype, how good were the robot-made burgers and fries? The robot burger, despite its higher-quality In-N-Out burger-style house sauce and fresh lettuce and tomato, was thoroughly mediocre. The beef was a little rubbery. Flippy’s fries, I admit, were crispy and nicely browned, not the limp potato offerings that often emerge from fast-food restaurants. I ate them happily, but did not crave more. Beef burgers and fries are the only options currently on the menu. One of the lone ordinary customers who came in during my visit asked some questions, but left without ordering. (He told me he wanted a veggie burger.) Another man walked in while talking on his cellphone, took a look around, and walked out again. After I left CaliExpress, I found myself driving to the closest McDonald’s, where I ordered another cheeseburger prepared by other humans. It was smaller, and the ingredients were clearly cheaper, but I found myself savoring the well-honed flavors of this drive-through classic. And I had set a timer: the humans had taken only one minute and 26 seconds to deliver a fresh burger into my hands. I felt my shoulders relaxing as I took a bite: so far, the humans were still faster than the machines.