

Machine Learning

The \$110,000 Robot Bartender Mixing Great Cocktails

Makr Shkr's new take on mixology is popping up on Royal Caribbean cruises and hotels around the world.

By [Siobhan Wagner](#)

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At a small cocktail stand in the middle of London's Barbican Centre, a crowd is watching a bartender spin and whirl around a shaker full of ingredients for a passion fruit martini. The mixologist's moves aren't quite as acrobatic as those of [Tom Cruise in Cocktail](#), but this level of behind-the-bar showmanship is the sort of thing that would normally fill a tip jar. The thing is, though, tipping isn't an option here. After all, what would a robot bartender spend the money on?

[Makr Shkr](#), a robotic bartending system serving customers at the [Barbican's "AI: More Than Human"](#) exhibition this summer, is the brainchild of Italian architect Carlo Ratti. While it started as a one-off project for a Google event in 2013, the technology is now a commercial product sold through Torino, Italy-based Makr Shkr Srl. The company has delivered robot bartending systems to [Royal Caribbean Cruises Ltd.](#) as well as hotels and exhibitions around the world. Emanuele Rossetti, chief executive officer of Makr Shkr, spoke with Bloomberg Markets special reports editor Siobhan Wagner about how he sees artificial intelligence and data analysis playing a future role in bars and restaurants.

How does the Makr Shkr differ from robots used for more industrial purposes like car manufacturing?

The machine uses different pieces. One piece is the robot arm, which comes from car manufacturing. The arms are put together with a lot of components that we prototyped, patented, and built, such as the lemon cutter, the sugar dispenser, the shaker, and the mint dispenser.

The Makr Shkr Photographer: Avocado Studio

What makes designing a robot to pour drinks rather than bolt doors onto a car more or less challenging?

If you need to produce a million cars all the same, you need less artificial intelligence. You just repeat a million times the same movement. Our machine is different because it interacts with a human being. A human being, through the app [that they download on their phone or use at a

stand], decides the recipe. The person decides if he wants a lemon slice or sugar, or to shake or stir. The sequence and the movement of the robot are different all the time. There's another difference to what the car industry does—they want to optimize the speed. Our scope was to make something that is a bit humanoid. We decided not to optimize the speed or the pure efficiency but to optimize the elegance of the movements.

What's your manufacturing capacity?

Two years ago we made a big investment in engineering. From last Christmas we are on the market with a machine that is dramatically cheaper [currently €99,000 (\$111,000), compared with the original €1 million prototype]. We are setting up a production site that will, by autumn next year, be able to produce between 70 and 80 robots per year.

Do you plan to release newer versions?

We are testing several components to have the Makr Shkr introduce milk and coffee. We are also starting to work on another machine with food components to produce hamburgers, frittatas, or salads.

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In what ways could machine learning technology make Makr Shkr even more advanced?

We are becoming big data owners. We've served more than 1.3 million cocktails worldwide. We know where in the world, at the time of the day, based on the sex of the person and the temperature outside, what people want to drink. We are also becoming data analysts. We can in the short future begin to be not only reactive but also proactive. When you go to order, we will know your age, your sex, and your country. With analysis we will know the average expectation. We can proactively [suggest] something tailor-made to your taste.

What makes Makr Shkr better or worse than a real, human bartender?

Let's start with the worst. Makr Shkr has no chance to invent any recipe. Makr Shkr is stupid. He doesn't have the capacity to understand the taste. What Makr Shkr is doing better than a human being is copying. If the recipe is perfect, Makr Shkr can copy that millions of times exactly as the original.

How much do you think robotics could penetrate the bar or restaurant market?

Machines making hamburgers, spaghetti, salad, pizza, or cocktails will grow a lot. They cost less than human beings, and they produce high quality. But they need to work beside human beings. With Makr Shkr it's not that we're canceling the bartender. The point is you're the bartender of yourself. The robot is just a pure executor of your idea.

In this article

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