

Mar 28, 2021, 08:25pm EST | 332 views

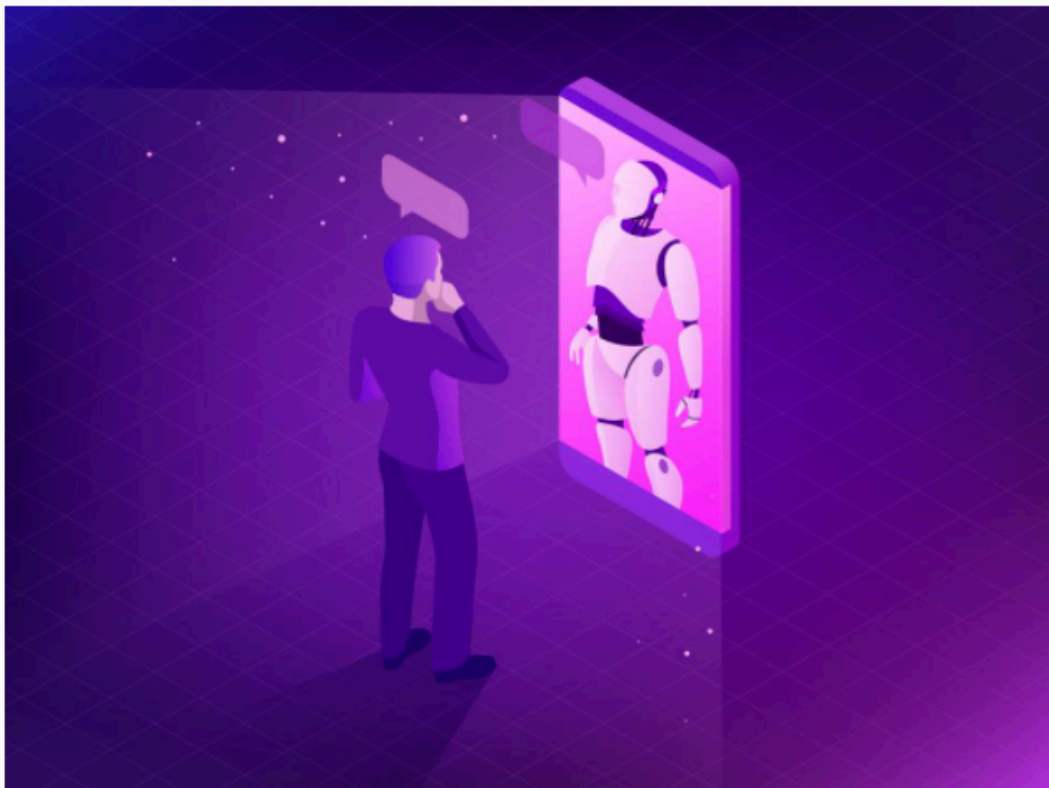
AI And Robotics Are Finally Ready For Your Home (and I Don't Mean The Roomba)

Michael Ashley Contributor ⓘ ⊕



AI

A former Disney screenwriting consultant, Michael is a professor at Chapman University. He has cowritten books on numerous subjects, including Own the A.I. Revolution. He owns the content marketing company Ink Wordsmiths and keynotes to business organizations on the power of storytelling.



AI-based robotics coming to a home near you. DEPOSIT PHOTOS



SHAMIN ABAS
COMMUNICATIONS FOR ULTRA-LUXURY BRANDS

For decades, a certain order structured the world of automation. Robots, most recently those powered by AI and Big Data, worked in factories, while humans enjoyed the benefits of their labor where we live and work. This traditional human/AI robotics divide will surely remain for some industries. No one is installing an industrial robot in their garage to build a car—*yet*. But the human/robot gap may soon dwindle, if not collapse, all because of one robotics expert who loves wine and was housebound due to an illness.

That last sentence might have thrown you for a loop. What could being a wine lover, an oenophile, to use the technical term, have to do with accelerating technology? The short answer is well, *everything*, and it has been that way **for at least 8,000 years**. Incredible leaps in innovation have regularly occurred just because people tried to make better wine and keep it drinkable for longer.

Don't believe me? The Greeks developed the Amphora, the ubiquitous jar powering the ancient seaborne trading economy, in large part to transport wine. Meanwhile, the wine bottle as we know it today has its roots in first century A.D. Roman glass innovations were designed to (you guessed it) protect wine while showing it off to the world. This means the smartphone screens and computer monitors we all rely on owe their existence in some part to wine.



But the wine industry's relationship with tech isn't just something relegated to the ancient past. Winemakers around the world are **embracing robotics and AI technology** in similar ways to their industrial counterparts, replacing raw steel with soil and sunshine, and grapes for finished goods. Bordeaux-based winery Château Clerc Milon uses a vineyard robot to collect soil data and pitch in on weeding. Palmaz Vineyards in Napa Valley harnesses Big Data to produce the perfect bottle, and some Australian winemakers are using machine learning to manage inventory and prevent contamination.

But these are *industrial applications* like the familiar factory robotics and AI systems we all know. Crossing over to the home environment—like so many technical innovations throughout history—is the result of a special person being placed in special circumstances. The person in this case is automation expert Mark Chaney, and the circumstance was his housebound recuperation from a serious illness.



Before this event, Chaney founded [Calvary Robotics](#) in 1994. For more than 25 years he has helped Fortune 500 and high-growth startups integrate robotics and AI into production lines. But several years before COVID-19 left many stuck in their house, Chaney found himself confined for six weeks as he recovered from a serious blood disorder. Despite strict orders from his doctor not to work, Chaney isn't the sort to relax and watch TV. Instead, he created inventions to bring robotics into the home. One of these proved so popular he built a company to market the idea, and [WineCab was born](#).

A longtime wine aficionado, Chaney wanted to utilize his other passion for robotics. As a result, he generated a system for storing wine in perfect conditions and delivering the selected bottle on demand. This is accomplished by a state-of-the-art six-axis high-speed robotic arm, the first industrial-strength model intended for home use. Built using collaborative robotics technology, it can safely work around humans. (Even a small robot arm can pack a wallop capable of dropping Iron Mike, but collaborative robotics, combined with multiple cameras and safety sensors, keep WineCab's system safe.)



The first to see WineCab in action outside of Chaney's family were 20 guests who attended a party celebrating his recovery. Mesmerized by the robot's fluid movements, they watched it deftly select a bottle and dispense it for the crowd. Some attendees compared what they saw to fine art. Actually, the system does a type of performance piece not typically found in the home.

To be sure, if inventively dispensing bottles of wine is all there is to WineCab, that may be where the discussion would end—a high-tech wine vending machine doubling as an ingenious parlor trick. But the robot arm only scratches the surface of the system. WineCab's real power is the AI bringing the system to life.

As is often the case, necessity is the mother of invention. This was true for Chaney. A wine lover for years, he still had not developed a deep knowledge of this complicated subject. After enough friends had stumped him with their wine questions over the years, he resorted to printing laminated cards listing the bottles he owned. Also, recognizing how only a few well-heeled individuals could ever afford to have their own sommelier on personal staff, Chaney set out to equip his home wine system with an AI-powered *virtual* sommelier.



Like its human counterpart, WineCab's virtual sommelier can suggest food pairings for wine and make personalized recommendations based on your tastes. How? Well, believe it or not, wine is a perfect application of AI and Big Data. A human expert working in a restaurant may be able to build food pairings based on 100 labels, but can they handle 10,000? Probably not.

WineCab's system, on the other hand, can track data on *600,000* labels—and counting—drawn from their partners at Delectable, an app for oenophiles. This makes sense. One of AI's greatest strengths is its ability to discern meaningful patterns from vast amounts of data. This information is also helpful to humans in key ways. The system presents a wide range of content for each bottle, educating owners as their collection grows.

In spite of such benefits, WineCab's domestic entrée forces us to consider the biggest problem with robotics and AI. Will these innovations replace people? In the manufacturing world, thought leaders are trying to figure out how AI-powered robots and humans can collaborate in a *positive sum* game.



Already, the supersonic business jet company Aerion Supersonic uses machine learning for digital twinning, what might be thought of as an AI-driven sandbox environment for designing and testing applications that would cost fortunes in the real world. As Tom Vice, Aerion's President/CEO [explained to me](#), "I'm opposed to machines replacing humans. We look for opportunities to create synergies between machines and humans. In the end, we want to improve peoples' lives through advancements in our technology."

Meanwhile, in the home environment, Chaney believes WineCab can improve peoples' lives without costing wine industry jobs. Even better, WineCab offers to bring owners in closer contact with local wine experts. "There is a disconnect in most communities between sommeliers and wine lovers," says Chaney. "Most people will use a sommelier's services in a restaurant, but never at home. We're changing that completely. We don't hope to replace the sommelier. We hope to build stronger relationships that never existed before."



In this way, human experts will constantly be interacting with WineCab's virtual sommelier, a program led by Master Sommelier Virginia Phillip, a young woman leading the future of wine. Chaney also believes WineCab will provide humanistic benefits for owners, not just the wine community. As he explains, "Traditionally, a host may leave a gathering for 15 minutes to search the cellar for the perfect bottle. Because of WineCab, this process can happen in front of the gathering. It can even become a conversation point instead of a waiting game."

Ultimately, Chaney views WineCab as the best way to introduce AI-powered robotics to the home. And like Vice, he believes these tools can brighten humanity's future, not hinder it. He envisions a day in which the elderly and/or those homebound by illness (as he once was) will be served by better technology. "What if AI-powered robots could help humans fight isolation and depression? And not just that," he asks. "What if tech could improve the lives of our most vulnerable people?"

Witnessing WineCab's growing impact reveals just how much AI and robotics are poised to become part of our daily lives. No matter what form this crossover from industry to home takes, one thing is clear: the days of this technology applying only to the factory (or in the vineyard) are numbered. It's now up to us to find that harmonious synergy between machine and mankind.

