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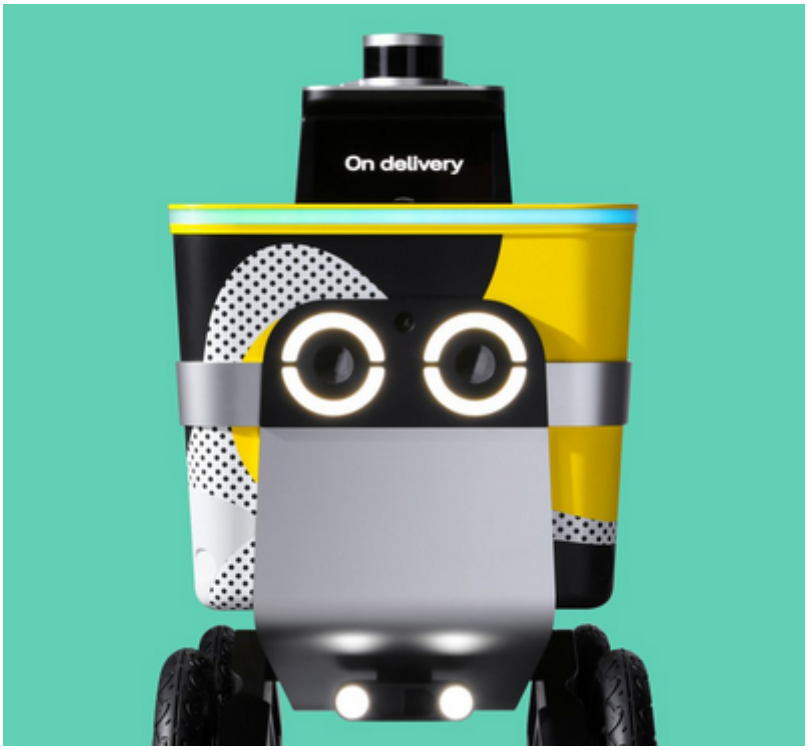
Uber delivery robots

serve

Uber

Serve Robotics is an Uber spinout; a type of corporate realignment involving the separation of a division to form a new independent corporation. A spinout takes with it the operations of the segment including the assets and liabilities.



What does Serve Robotics make? Sidewalk delivery robots. It's actually deploying its next generation of delivery robots capable of completing certain commercial deliveries without a person. Why is it a significant development worthy of your attention? In certain operational design domains or geofenced areas, the robots will not have to rely on remote operators that teleassist robots or followers that trail robots for safety purposes. Other companies are unable to make this same claim. Competitors depend on remote operators to monitor the deliveries; they even commandeer operational responsibilities such as driving functions in the event the robot demonstrates dysfunctionality.

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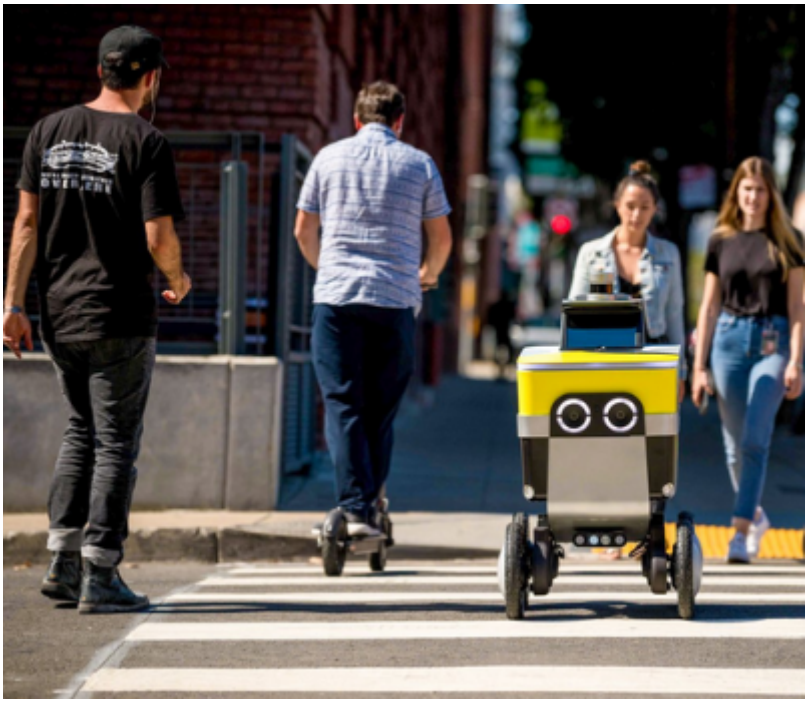

In December 2021, it actually completed its first delivery at Level 4 autonomy, which SAE (Society of Automotive Engineers located in Warrendale, Pennsylvania) defines as a system that can drive autonomously as long as certain conditions are met and will not require a person to commandeer driving functions. So. Where exactly are Serve's delivery robot with L4 capabilities being tested? The ones that currently possess L4 capabilities are in select neighborhoods within Los Angeles, California, such as Hollywood.

How does it work? When the robot is in a given area where Level 4 is enabled, the remote video feed turns off and the robot continues navigating autonomously without requiring a person's assistance. These robots may request assistance in the event something unexpected arises. The robots are programmed to activate the video while crossing intersections. While it's impressive, more work remains. Until autonomous vehicles reach Level 5 capability, under which the system can operate in all conditions without a person, there will always be edge cases with which the robots are unfamiliar.

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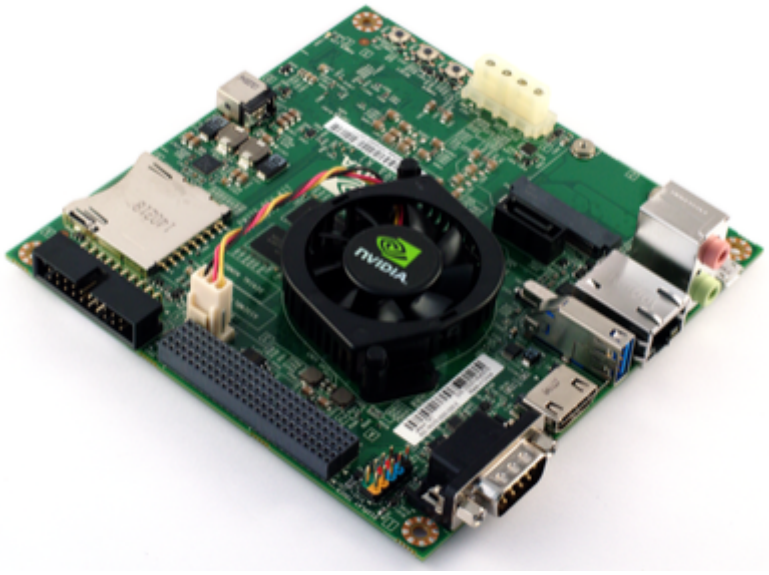
Edge case

From Wikipedia, the free encyclopedia

In computer programming, an edge case is a problem or situation that occurs only at an extreme (maximum or minimum) operating parameter that involves input values that require special handling in an algorithm behind a computer program. In this instance, these input values could be comparable to daemon programs (aka: the background programs). In order to validate the behavior of computer programs in such cases unit tests are usually created as a testing measure; they are testing boundary conditions of an algorithm, function or method. These tests could be expected or unexpected. The process of planning for and gracefully addressing edge cases can be a significant task. Yet this task may be overlooked or underestimated. Relying on people (instead of machines) for these tasks makes some sense for safety reasons.

OUSTER

Serve's new delivery robots are fully equipped with a broad range of active sensors, such as ultrasonic proximity sensors and lidar proximity sensors from Ouster; and passive sensors include the cameras that are required for assistance with navigating the busy sidewalks. Serve has additionally developed custom capabilities for its bots such as: automatic crash prevention, vehicle collision avoidance and fail-safe emergency braking.



Just imagine the mathmatical computations required to produce those capabilities in real-time; powered by chip-maker Nvidia's Jetson platform, which is designed specifically for robots and other autonomous machines.

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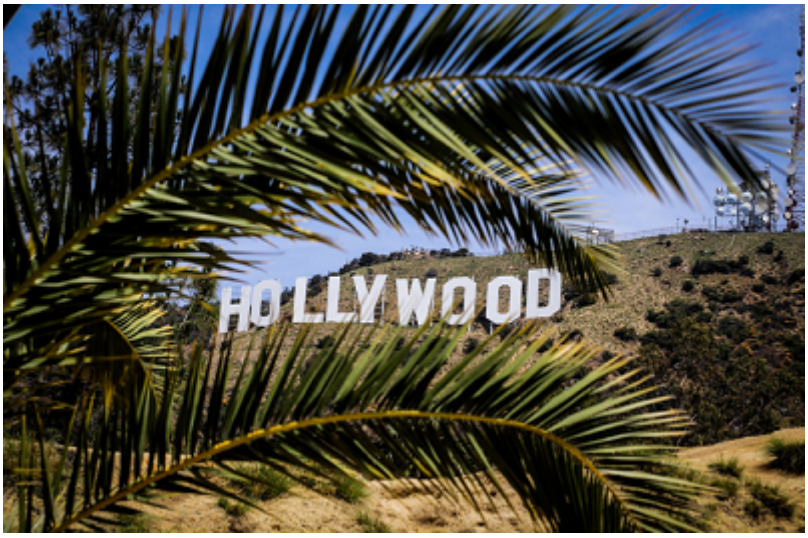

Serve recently announced it is accelerating its expansion plans into new customer segments and geographic areas, in line with their ambitious goals. The next step is deploying its next generation robots into all of Los Angeles.

IDTechEx

Within the next decade, the business of sidewalk delivery robots is projected to be generating about one billion dollars a year in sales, according to IDTechEx; an analyst firm. The autonomous machines not much larger than a suitcase are already busy delivering groceries and other goods. The test areas aren't only in America but China and Europe too. The growth rate would appear to be outpacing driverless cars, vans and trucks in development. But it faces an obstacle. It's government regulation, which may change in time; once people begin to grow accustom to these useful delivery devices. How much time remains to be seen. Meanwhile, regulators need some convincing.

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press releases called Flooring Updates.