

Uber, Carnegie Mellon partnering on Pittsburgh research lab (Update)

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Ride-hailing service Uber is partnering with Carnegie Mellon University on a Pittsburgh research lab both hope could lead to the development of driverless cars.

Carnegie Mellon and its Robotics Institute have been working on driverless vehicles for years, and its work is part of the reason the city has successfully segued from an industry-driven economy to one based on technology and medicine in the last 20 years, with the nearby University of Pittsburgh Medical Center pioneering transplant medicine and other breakthroughs.

The Uber-Carnegie Mellon deal is "another case where collaboration between the city and its universities is creating opportunities for job growth and community development," Mayor Bill Peduto said.

The partnership announced Monday includes Uber funding for faculty chairs and graduate fellowships at the private research university.

San Francisco-based Uber said the Uber Advanced Technologies Center will also focus on mapping and safety technologies in support of its ridehailing mission.

The lab to be built near CMU's National Robotics Engineering Center will occupy part of two buildings, including a former chocolate factory.

"Carnegie Mellon has been working very hard over the last few years,



developing direct relationships with the absolute top companies in technology and science," said Andrew Moore, dean of the university's School of Computer Science. "So it's not surprising that we tend to bump into each other."

Carnegie Mellon has partnered with search engine giant Google, which opened offices in the city in 2006, and in 2007 won a \$2 million prize by helping General Motors develop a driverless SUV that won a 60-mile race sponsored by the Defense Advanced Research Projects Agency.

Google later poached a Carnegie Mellon robotics specialist, Chris Urmson, to lead the development of its self-driving car project. Over the past several years, Google has aggressively developed self-driving technology—vaulting past traditional automakers in the process—and says cars it has outfitted with an array of sensors and computing power have driven hundreds of thousands of miles without human intervention.

"We said, 'Hey, who are the best in the world at this from an academics standpoint and bringing this kind of technology into the real world?" said Jeff Holden, Uber's chief product officer. "And CMU is at the top of that list. So that's what started it and why we reached out."

Adam Jonas, an auto industry analyst for Morgan Stanley, predicted in a note to investors last year that in 15 to 20 years, Uber could develop, manufacture and own a fleet of autonomous taxis that people could summon with the push of a smart-phone button. This could supplant personal ownership of cars and eventually disrupt the auto industry's business model, because personal ownership of cars would no longer be needed to get around.

After reading of the tie-up with Carnegie Mellon on Tuesday, Jonas wrote that change is happening quickly. "This type of announcement comes as much as five years earlier than we anticipated," he wrote in a



note to investors. "Things appear to be moving far faster than any of us realize."

In the note, Jonas wrote that the journey to the end of humans driving cars may take a generation to happen and will hit obstacles, but he believes the process has been started. Computers, he wrote, can drive better than people, and once a fleet of connected cars is available, people's use of automobiles will change, "ultimately obviating the need for the vast majority of individual vehicle ownership."

Uber operates in 200 cities in 54 countries, including Pittsburgh and Harrisburg. Last week, the state Public Utility Commission granted Uber a two-year experimental license to operate everywhere in Pennsylvania, except Philadelphia. The company still operates there, despite not having approval for its service, which lets passengers use smartphone apps to hail rides from drivers who use their own vehicles.

The CMU partnership is just the latest to raise Pittsburgh's profile as a technology center.

"After so many years of being 'Robo-Burg' we're getting attention," said Audrey Russo, president and chief executive officer of the Pittsburgh Technology Council. "It's a great opportunity."

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