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Argo AI to invest \$15M in research lab at CMU

By Courtney Linder
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The buzzy self-driving car startup in which Ford invested \$1 billion two years ago - Strip District-based Argo AI - announced Monday that it's making a financial promise of its own: committing \$15 million to Carnegie Mellon University to establish an on-campus research hub.

Aptly named the "Carnegie Mellon University Argo AI Center for Autonomous Vehicle Research," the hub will be dedicated to at least five years of deep exploration into some of the greatest challenges for self-driving cars.

At the moment, this mostly includes advanced perception research, which helps vehicles "see" obstacles on the road, and vastly improved decision-making algorithms that help the cars' internal computers manage various courses of action they may take, opting for the safest one.

Deva Ramanan, an associate professor in the Robotics Institute who also serves as machine learning lead at Argo AI, will lead the new Argo lab.

Argo AI isn't the only company experimenting with autonomous vehicles on campus, though. Raj Rajkumar, a noted researcher in autonomous-vehicle technology - and the founder of a startup called Ottomatika, acquired by O'Hara-based self-driving firm Aptiv - runs the General Motors-Carnegie Mellon Connected and Autonomous Driving Collaborative Research Lab.

Uber is also funding on-campus projects.



Courtesy of Carnegie Mellon University

Argo AI has committed \$15 million over five years to establish a research lab on CMU campus.

A young startup grows up

Argo AI CEO Bryan Salesky is a Pittsburgh native. From a young age, he recalls the city being the epicenter of self-driving research.

The university's first autonomous vehicle, he said, was called the Terregator. It was a mobile robot designed for both indoor and outdoor testing to study navigation, sensors and more.

"[It] drove at the lightning speed of several centimeters per second," Mr. Salesky said to laughs from the audience. "That was back in 1984. I was four years old."

A lot has changed since then.

Due in large part to early research like the Terregator, there is now a blossoming self-driving industry in Pittsburgh with companies such as Uber, Aptiv and Lawrenceville-based Aurora Innovation testing vehicles on our streets, in addition to Argo AI.

Since Argo was established in late 2016, it has grown from three employees to about 400. And, of course, there's that huge infusion of cash that Ford gave Argo mere months later in 2017.

Setting up shop on CMU's campus likely will create another huge benefit

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for the young company, considering that the demand for engineers in the self-driving space is fierce.

The lab creates a direct pipeline for fresh talent, allowing students to work in the lab while in school and possibly even secure a job at Argo AI upon graduation. Mr. Salesky calls these students the “next generation” of self-driving vehicle researchers.

Significantly, all research and software developed at the center will be open-source, meaning other companies or universities can leverage its findings.

Carnegie Mellon, for its part, will benefit from having new industry resources and research that it otherwise wouldn't have access to, such as private self-driving data sets, fleets of cars and other computer and hardware equipment that otherwise would be difficult to obtain, according to Mr. Ramanan.

'We can't do this alone'

Farnam Jahanian, president of CMU, said during a campus news conference that this partnership represents a new way of thinking about collaboration between industry and academia.

“We can't do this alone,” he said before a room filled with industry experts, researchers, public officials and students.

Considering the formation of similar academic-corporate partnerships in the autonomous vehicles research space, that seems to be true.

At the Massachusetts Institute of Technology, there is a lab within its computer science and artificial-intelligence school completely dedicated to the development of self-driving tech.

Toyota put \$25 million into this endeavor in 2015. The aim is to reduce traffic casualties and work toward creating a vehicle that won't get into accidents. Similar to CMU, the MIT lab is researching decision-making algorithms and perception systems.

At Stanford, Toyota spent another \$25 million that same year to set up an autonomous research lab. Their focus is on “human-centered artificial intelligence for future intelligent robotics,” as the university calls it. That basically comes down to developing new approaches to machine perception and reasoning, as at CMU.

At CMU, there also will be a human component to Argo's research.

Much to the delight of Pittsburgh Mayor Bill Peduto, who was in attendance, the center also will focus on safety improvements and explore ethical questions that arise from the commercial deployment of self-driving technology.

The mayor somewhat facetiously suggested that Argo and CMU employ some philosophers in the new lab.

In any case, he was hopeful that professors in the humanities will play a role in the research.

Meanwhile, Mr. Salesky said the partnership and financial arrangements for the new lab are about more than just advancing research: They also are about preserving the heart of self-driving car development in Pittsburgh, where he says it all began.

“This really is, truly, the birthplace of autonomous vehicles.”

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