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# From Gaming to Artificial Intelligence

How Nvidia enables autonomous driving



There are already self-driving cars on the road today, but they are not fully autonomous, as a human safety driver is still required. Before the human driver can be removed, autonomous vehicles must prove they are much safer than human-driven vehicles. "There's a lot we still have to do to get to that point. For example, we have to train the software so that it can detect not only a pedestrian about to cross the road, but also whether this pedestrian is, perhaps, distracted and hasn't seen the car," says Shapiro. "Safety is our highest priority. Everything we're focused on revolves around it."

Training and testing the AI software takes time, which is why Nvidia has developed a cloud-based simulation platform, Drive Constellation, to help speed up the process. It enables millions of miles to be driven in virtual environments, over and over, in diverse scenarios. It is an efficient way to test and validate the brains that will one day take over, before testing takes place on real roads. "We believe that the next generation of transportation is autonomous," says Shapiro. "The advantages are enormous. Autonomous vehicles will make our roads much safer and reduce congestion. And it won't only be cars: there will be autonomous trucks, shuttles, and buses as well as agricultural and construction vehicles." Nvidia is working with virtually every car and truck manufacturer and with all the sensor and mapping companies to get us to that autonomous future.

Today, Nvidia is an established technology giant, but it is still as nimble as a startup. "Here in Silicon Valley we're constantly trying to do things that have never been done before," says Shapiro. "Our ability to anticipate change and reinvent ourselves quickly has been the foundation of our success."

Info

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