

WINNER PROFILE



➔ **Meet: Jesse Hurdus**
Technical Program Lead, TORC Robotics Inc., Blacksburg, Virginia

➔ **The Challenge: DARPA Urban Challenge**

This Defense Advanced Research Projects Agency (DARPA) challenge was an autonomous vehicle research and development program aimed at developing technology to keep warfighters off the battlefield and out of harm's way.

➔ **The Prize:**
 \$500,000 (for third-place finish)

💡 **The Solution:**
 The Virginia Tech-based team came up with Odin, a Ford Escape outfitted with a custom drive-by-wire system and computers that successfully navigated DARPA's course, operating without human intervention while obeying traffic laws and performing maneuvers such as merging into traffic, navigating traffic circles, and avoiding obstacles.

📞 **For More About the Winner:**

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SUCCESS: IN HIS OWN WORDS

How has participating in this challenge helped you advance your solution?

Placing third in this challenge gave us a platform for demonstrating our technical expertise in the emerging field of self-driving vehicles. With the prize money, TORC expanded, hiring top talent from the unmanned systems research lab at Virginia Tech, cementing a company culture of pragmatic problem-solving in the face of "never-been-done-before" challenges. Based on our performance in the DARPA Urban Challenge, we won a follow-on contract to transition the technology to a military Humvee for the Joint IED Defeat Organization, leading to a stream of government contracts that continues even today, eight years later.

What is the impact of your solution for government, your community, and society?

Our unmanned ground vehicle and self-driving technology allows us to remove the warfighter from dangerous, often life-threatening situations. Our systems can be deployed in a variety of ways, from IED defeat, to biochemical and nuclear forensics, to runway battle damage assessment and repair. In each, our technology provides tools for reducing risk and saving lives. We have been able to work with several different branches, agencies and labs within the Defense Department. We also have built systems with commercial applications in mining, agriculture, and the commercial automotive space. We even were able to complete the Blind Driver Challenge, issued by the National Federation of the Blind in 2010, to build a vehicle equipped with non-visual interface technology. It allowed a blind driver to complete a course at 25 mph prior to the start of the Rolex 24 in Daytona in front of thousands of spectators.

