

Self-driving cars will be part of the future, but researchers fear we are leaving the disabled behind

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Self-driving cars will be part of the future, but researchers fear people with disabilities are being left behind in the development of the

technology.

Over the past two decades, transportation has become more accessible, but people with [disabilities](#) still face significant barriers to accessing these services. While self-driving cars (also known as autonomous vehicles) have the potential to dramatically improve the lives of those with disabilities, helping them to travel independently, experts fear their views are being neglected in the development of the new technology.

To address this, researchers from Warwick Manufacturing Group (WMG) at The University of Warwick and leading disability charities have considered the impact of self-driving taxis on people with disabilities, an area that has seen limited improvement over recent years. Their findings will be presented at [26th IEEE International Conference on Intelligent Transportation Systems](#) held in Bilboa, Spain, Sept. 24–28.

They found that the absence of a driver was strongly correlated with feelings and perceptions of increased travel freedom, indicating that autonomous taxis could provide greater accessibility for those with disabilities—without the limitations or biases associated with their current experiences with traditional taxis and drivers.

The team also considered current issues people who have disabilities face with transport—particularly in booking [taxi](#) journeys. Participants expressed concerns about driver attitudes and behavior as negative experiences with traditional taxis.

Lead author Shravani Sharma, Ph.D. Researcher, WMG, University of Warwick, said, "Our research highlights the current issues those with disabilities face when booking taxis—with many reporting that their trips have been canceled due to their use of a wheelchair. Drivers might feel the extra time wheelchairs add to journeys would reduce their earnings. While there are laws in place preventing black cab drivers

canceling journeys for those with wheelchairs—there are no such laws for other companies.

"Self-driving taxis could provide those with disabilities more freedom and reduce fear of discrimination. So, it's crucial we listen to their opinions in developing the technology.

"We worked with charities including CASBA (Citizen Advocacy South Birmingham Area), which supports people with learning difficulties, Royal National Institute of Blind People (RNIB) and Cerebral Palsy Midlands to name a few, providing a wide range of voices and expertise. This represented many different visible and non-visible disabilities—including blindness, mobility problems, hearing loss, cerebral palsy and ADHD among others. The perspectives of more than 39,000 different organization members were included.

"Alongside the current problems those with disabilities face when booking taxis, we highlighted their concerns for future, self-driving taxis. The main concern was the availability of human assistance to meet specific user needs throughout the journey."

Examples of concerns for future, [self-driving taxis](#):

- The challenges faced by individuals in wheelchairs when attempting to enter a car without assistance are multifaceted. Tasks include placing their wheelchair inside the car, securing themselves within it, disassembling and carefully navigating the wheelchair upon departure.
- For those with [visual impairments](#), the struggle lies in identifying their vehicle within a crowded setting, such as a bustling railway station.
- The loss of social interactions and the light-hearted atmosphere during journeys. Many individuals with disabilities unfortunately

contend with feelings of loneliness and isolation, making everyday conversations a vital source of companionship and comfort throughout their journey.

Shravani added, "It is also important that manufacturers consider the wide range of disabilities and the intricate needs for passengers—remembering that not all disabilities are visible."

Dr. Roger Woodman, Head of Human Factors, at the University of Warwick, said, "Self-driving vehicles will open up driving to people that have never been on their own in a vehicle before. It has the potential to transform their lives—with reduced reliance on others to help them get from A to B.

"Driving is a very complex task to complete, so [self-driving cars](#) could enable someone with a disability, for example, cerebral palsy or tremors, to simply press a button and go."

Ginny Cullen, CEO of CASBA, added, "CASBA exists to ensure people with learning disabilities speak up for themselves, express their views, make their choices, and are valued as citizens. We were therefore delighted to have had the opportunity to be included in this research on new [autonomous vehicles](#) to ensure driving is accessible to all."

More information: Shravani Sharma et al, Exploring the Impact of Autonomous Taxis on People with Disabilities:

www.researchgate.net/publication/311111111

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