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Short Communication

Accountability of Accidents caused by Autonomous Vehicles

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ABOUT THE STUDY

The development and deployment of Autonomous Vehicles (AVs) has been a significant advancement in transportation technology. AVs have the potential to greatly reduce the number of motor vehicle accidents caused by human error. However, accidents involving AVs still occur, raising questions about who is responsible for these accidents [1]. Determining who is to blame for an AV accident is a complex issue that involves legal, ethical, and technological considerations. One of the challenges in determining who is at fault in an AV accident is the nature of AV technology. AVs use a combination of sensors, cameras, and algorithms to operate without human input. However, these systems are not infallible, and accidents can occur due to technical malfunctions or errors in the programming [2]. In these cases, it may be difficult to determine whether the accident was caused by a flaw in the technology or human error in its design or implementation. Another factor to consider is the role of the human operator, or lack thereof, in an AV accident. Some AVs are designed to operate without any human input, while others require a human operator to monitor the system and take over control if necessary. In accidents involving fully autonomous vehicles, there may not be a human operator present to take responsibility for the accident. In these cases, the blame may fall on the manufacturer or developer of the AV technology. Legal responsibility for AV accidents is another consideration [3]. Currently, liability for motor vehicle accidents is typically determined by the concept of "negligence." Negligence involves a failure to exercise reasonable care in a particular situation, resulting in harm to another person or property. In accidents involving AVs, determining negligence can be challenging due to the complex nature of the technology and the lack of legal precedents. Some legal experts suggest that liability for AV accidents should be determined by a "strict liability" standard. Strict liability means that a manufacturer or developer is responsible for any harm caused by a defective product, regardless of whether they were negligent in producing it. This standard could shift the responsibility for AV accidents from individual drivers to the companies that manufacture or develop the technology [4]. Ethical considerations are also important in determining who is to blame for AV accidents. The development and deployment of AVs raise questions about the safety and well-being of both passengers and other road users. Some argue that the safety of passengers should be the top priority, while others argue that AVs should prioritize the safety of all road users, including pedestrians and cyclists. Additionally, there are concerns about the potential for AVs to exacerbate existing inequalities in access to transportation. AV technology is expensive to develop and deploy, and it may only be accessible to those who can afford it. If AVs are designed to prioritize the safety and convenience of passengers, this could lead to further disparities in access to transportation. To address these ethical concerns, some have suggested that AVs should be designed with ethical principles in mind. For example, AVs could be programmed to prioritize the safety of all road users, rather than just the safety of passengers. Additionally, AVs could be designed to prioritize access to transportation for all, regardless of socioeconomic status [5].

CONCLUSION

In conclusion, determining who is to blame for AV accidents is a complex issue that involves legal, ethical, and technological considerations. As AV technology continues to develop and become more widely used, it will be important to establish clear legal and ethical standards for determining responsibility in accidents involving AVs. This may involve developing new legal precedents and ethical frameworks that take into account the unique nature of AV technology and its potential impact on transportation safety and access. Ultimately, the goal should be to ensure that AVs are designed and deployed in a way that maximizes safety and accessibility for all road users.

REFERENCES

1. Bagloee SA, Tavana M, Asadi M, Oliver T. Autonomous vehicles: challenges, opportunities, and future implications for transportation policies. J. Mod. Transp. 2016;24:284-303.
2. Zhao R, Mao K. Topic-aware deep compositional models for sentence classification. IEEE/ACM Transactions on Audio, Speech, and Language Processing. 2016;25(2):248-60.
3. Koh BH, Lim CL, Rahimi H, Woo WL, Gao B. Deep temporal convolution network for time series classification. Sensors. 2021;21(2):603.

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4. Duan J, Shi D, Diao R, Li H, Wang Z, Zhang B, et al. Deep-reinforcement-learning-based autonomous voltage control for power grid operations. IEEE Transactions on Power Systems. 2019;35(1): 814-7.

5. Wei Q, Liu D, Shi G. A novel dual iterative Q-learning method for optimal battery management in smart residential environments. IEEE Transactions on Industrial Electronics. 2014 Oct 3;62(4):2509-18.