

Risk and Liability in Autonomous Vehicle Technology

TREO Talk Paper

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Abstract

Autonomous vehicle (AV) systems failures recently caused multiple accidents that resulted in serious personal injury and death. These include a March 2018 accident involving a Tesla vehicle in autopilot mode that crashed into a divider on a highway, killing the driver. Another incident involved a fully autonomous Volvo XC90 sport vehicle, owned by Uber, colliding with a pedestrian, on a bicycle, crossing the road in Tempe, Arizona (Vincent, 2018; Kohli & Chadh, 2019). As a result of these mishaps, potential passengers and owners are now apprehensive towards AV systems technology. This research examines AVs from two perspectives: AV passenger perceived system risk, and AV owner perceived system liability. It develops an AV risk model that explains the attitude of passengers towards AV technology and an AV liability model that explains the attitude of owners towards AV technology. The study addresses the following research questions: 1) What liability factors influence the attitude of AV owners towards AV technology? 2) What risk factors influence the attitude of passengers towards AV technology?

We conducted an online survey of qualified Amazon MTurk respondents residing in the US. Findings indicate that owners are sensitive to the liability involved in acquiring AV technology. They worry about who they let use their vehicle and consider legal repercussions when determining their perceived liability in the event that something goes wrong. Passengers are sensitive to the risk involved with riding in AVs. They care about various types of risk including physical and psychological risks, when judging AV Technology.

References

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