

Moral Dilemmas in Self-Driving Cars

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Autonomous driving systems represent a vast field of research and applications, promising important changes in the future, primarily in the reduction of road accidents. Ethics, however, is a major obstacle in its development. The ethical problem is dichotomized into two sub-issues. On the one hand, the vehicle is forced to face situations of risk where damage is inevitable; for example, by choosing between protecting pedestrians or passengers. And, on the other hand, ethics concerns liability in the event of an accident – one wonders whether it should be attributed to the manufacturers or passengers of the vehicle.

Based on the first ethical sub-problem, our work focuses on the study of the moral behaviors of humans subjected to a critical situation, with the aim of delineating the boundaries between real driving choices and automatic reactions. Recalling the well-known “Trolley Dilemma” and with the help of virtual reality (Oculus Rift VR), a specific critical scene of a road accident was constructed, with the aim of investigating the known scenario from a more controlled artificial procedure.