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Category: Road

Country: Spain

Research Area 1: Smart Solutions and Society

Idea Number: 105

# DRIPRAI: Driver Profiling by Artificial Intelligence

Modern cars can collect data from several hundreds of sensors through the controller area network bus technology. The controller area network bus is a message-based protocol designed to allow the electronic control units found in today's automobiles, as well as other devices, to communicate with each other in a reliable, priority-driven way. Messages or frames are received by all devices in the network, which does not require a central computer. The controller area network bus standard is commonly used in all vehicles due to its main advantages, which are robustness, simplicity, affordability, and full centralisation. Controller area network bus technology can provide almost real-time information about the vehicle, the surrounding environment, and the driver. These data can be later processed and analysed to offer efficient solutions and insights for human behaviour analysis, and further applied in a variety of fields, such as accident prevention, driver identification, driving model design, and vehicle energy consumption prediction. Characterising, understanding, and predicting driver behaviour in real driving conditions will lead to fewer accidents, less breakdowns, better energy management and ultimately, getting vehicles to their destination faster and efficiently. In this research, a novel, end-to-end framework for driver behaviour characterisation, analysis, and prediction in a real driving condition are developed.

