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Analysis of IoT-based vehicle anti-theft security

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Abstract

A vehicle anti-theft system is a security system that prevents authorized use of a vehicle and its theft. Vehicle theft and hijacking are skyrocketing on daily basis despite the swift technological advancements the world is witnessing. Several vehicle anti-theft systems have been proposed, developed, and deployed using several technologies such as Internet of Things based, biometric-based or hybrid. Therefore, this paper performed the analysis of some of the existing systems to identify the solutions offered, technologies utilized, limitations and provide research directions for improvements. We considered 11 papers and the findings obtained revealed the existence of several vehicle anti-theft approaches employing common technologies and approaches to protect vehicles from theft and hijacking. However, the techniques employed are prone to manipulation and destruction thereby not preventing or reducing vehicle theft since the systems are embedded in the vehicle. Consequently, there is the need to design or develop a vehicle anti-theft and monitoring system that is not a component of the vehicle. This could go a long way to reduce the rate of vehicle theft in society.