Sustainable Smart Parking System

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Abstract

Smart cities are one of the forms of the fourth industrial revolution, and one of its applications is smart parking. In this study, a model was designed and developed for efficient car parks in Jordan with the aim of managing the parking lots smartly using emerging technology. The system detects and counts the cars entering and leaving the car park, and when the car park becomes full, the system prevent cars from entering the parking lot. The developed system guides the drivers to the free spaces and suggest nearby alternative parking lots for the entering vehicles. Furthermore, it displays the environmental measurements inside the park. Simulation is used to evaluate the system and the system was developed and applied to a case study to demonstrate its effectiveness. The developed system helps reduce the waiting time, cost, pollution, and improve the safety. The system is designed to be scalable and affordable for different sizes enterprises.

Keywords

Smart city, smart parking, simulation system, sustainability, park management and safety.