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Intelligent, Driverless Automated Valet Parking System

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Abstract: *This project report has shown the concept of automatic car parking system, which can automatically sense the empty space available for parking and according to it displays the number of empty platform available on the LCD. This automated car parking system reduces the time taken to check the space for the vehicles. In this proto we used the infrared sensor s to follow path & ultrasonic Sensor which detectparking slot is empty or not to sense the cars. The perception system corresponds to a fusion between an ultrasonic system and aIR sensor. It provides the localization of the vehicle, the navigable area around the car and a map of already visited areas. This information is used afterwards as input for the car control system in order to ensure it's integrity during navigation. The Autonomous Valet Parking system is able to take control of the car and to drive it from the drop-off zone to the parking and from the parking to the pick-up zone. In the following it will be described the hardware and the software system architecture and the main principles of algorithms.*

Keywords: Valet Parking, Automation, Line Follower, Obstacle Detection, Microcontroller

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