Initial Report of The Project

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Project Statement

To develop a parking management system to count number of vehicles in the parking lot.

Proposed Solution

This can be archived using microcontroller platforms capable of supporting telemetry using renowned protocols such as MQTT , COAS or other IOT (Internet of Things protocols) by installing necessary transducers such as HC04 (Sonar Sensor) . The telemerty data can be accessed using elaborative dashboards embedded with statistical analysis tools.

Technical Details

NodeMcu : With the increase in demand of IOT products. Espressif has developed a platform to meet all the requirements necessary for connecting microcontroller to internet on a small piece of board in very cheap price.

ThingsBoard: It is an open source IoT platform for device management, data collection, processing and visualization for your IoT projects.

HC04 : Ultrasonic ranging module HC SR04 provides 2cm 400cm noncontact measurement function, the ranging accuracy can reach to 3mm. The modules includes ultrasonic transmitters, receiver and control circuit.

MQTT : Open source protocol to communicate between heterogeneous devices through internet.

Online repository : https://github.com/codeSmith777/teamUrbanic