

### **Smart Parking System**

The smart parking system will need to be reliable, real time, simple, easy to install and maintain without forgetting cost effective. The most important was the mode of sensing vehicle presence.

We discussed and did research on different sensing principles and decided the best sensor was a magnetometer sensor. A magnetometer works by using a passive sensing technology to detect large ferrous objects (for example, a truck, automobile) by measuring the change in the ambient magnetic field. When a vehicle alters that magnetic field, the sensor detects those changes.

The advantage of a magnetometer is it provides a cost-effective and convenient alternative to other sensing technologies. It requires no wiring or external control box but achieves an accurate and repeatable response. less invasive and easier to commission quickly compared to for example inductive loops.