

## CHAPTER 5

### CONCLUSION

We have modified YOLO object detection code to detect parking lot occupancy with energy power-aware consideration by performing the most simple low complexity motion detection algorithm. When there are moving objects in the area of the parking lot, then YOLO object detection is invoked and the bounding box of the object detected is checked with the parking available slots. With the energy-aware algorithm, the power consumption can be reduced to 97 percent when no object is moving in the parking area, or else there is 71 percent reduction when there are always moving objects, but it is without cost; there is a tradeoff for reduction in speed which is run at an average of 15 fps. This is about 2 seconds delay. In future work we will retrain the YOLO with real car dataset and apply them to the actual or real parking lot environment for availability detection.

