ACM Proposal

For

Sensors to Track Available Parking Spots

Goal: Improve the deplorable parking situation on campus by tracking available spots in real time and giving students access to this data.

Proposal: use sensors to keep a database up to date of all available spots. Make this data accessible on a user friendly web interface.

Options: There are several options for the type of sensors we can use.

1. Video: devices with cameras aimed at every parking spot.
   1. Advantages: We can specify the exact location of every available parking spot.
   2. Disadvantages: More expensive, need more cameras, more complicated technology.
2. Motion Sensors: Track entrance and exit of each vehicle into each lot.
   1. Advantages: simpler, cheaper, uses less power.
   2. Disadvantages: not as precise as video. Can only get count for entire lots.

Tasks:

1. Determine cost of each option and choose one, or a combination of both.
2. Create a prototype and test on a single lot.
3. Write a grant proposal to the student government.
4. Work with the IEEE student club to build the sensors.
5. Deploy the sensors.
6. Test and fix any errors.
7. Encourage widespread use and report results to student government.

Timeline: Up for discussion

1. Have a working prototype by the end of the Fall 2016 semester and begin testing.
2. Get funding approval by the end of January 2016.
3. Have all the sensors installed by the end of the Winter 2016 semester.

Future Tasks:

1. Build an iOS and Android app that notifies students where to park when they enter a geofence around campus.