On May 20th, I attended the Capstone Projects presentation which held in room V704 between 5:30 and 8:00pm. The reason I went is because I’m interest to learn about what my colleagues do in their Capstone project. This also gave the insight of what I’m might do once I take this course. There were three groups and their projects are pretty interesting.

The first group made a quadcopter with a camera. A quadcopter is lifted and impelled by four rotors. It’s controlled by a microcontroller. Quadcopter uses two pairs of rotors; two clockwise and two counter clockwise. These use independent variation of the speed of each rotor to maintain control. By adjusting the speed of rotor, it produces both a thrust and torque. The group presents how to create opposing torques for control by showing the schematic of the rotor. As two rotor spin in one direction, the other two rotors will spin in opposite direction to maintain control. The quadcopter is controlled by a remote controller with an interface displays what the camera see.

The second project was an autonomous car. Is consists of five ultrasonic sensors, a GPS, and a compass. The purpose of the ultrasonic sensors was to detect where the obstacle is located to avoid the car from hitting towards the obstacle. The GPS is used to determine accurately where the car is. The group provides a video demonstration of how it works and it was good.

The last project presented was the autonomous train. A prototype train is controlled by a microcontroller. As the train moving on the track, it passes sensor and slows down. Each sensor had a led on it. Once the train moving towards the sensor with a red led on it, the train would stop and opens the door for 15 seconds. This project is similar of how the MTA subway works.

Overall, it was a good to participate this event and able to learn what every group present for their Capstone project course and how they overcome some difficulties during the process. They all did a wonder job. I really learn a lot from this presentation. This helps me to be prepared when I take this course and I’m looking forward to.

  