In addition to the code and the physical design of the robot’s functionality, we developed a LabVIEW Virtual Instrument to provide us with visual feedback of the robot’s perspective. This was valuable for debugging by seeing where the robot thought it was in the course, and also providing data on what obstacles the robot was seeing. This LabVIEW VI talked to the robot via a wireless TCP/IP connection. The Robot acted as server transmitting the data and the LabVIEW VI. The data from the aspects listed above were all displayed on this interface. The robot’s position is printed and also rendered on the image. Of course, it was possible to also show the trail of the robot on the screen as well. The robot’s obstacle detection also helped feed data to the LabVIEW VI. We were able to accurately represent these on the VI as well. We were also able to display the locations of detected balls on the map and plot them as well on the VI. You can see the result of a run of the robot to the left. Finally we actually were able to update custom mapped parameters on the robot as well directly from the VI.