

Trevor Decker

IRL 08

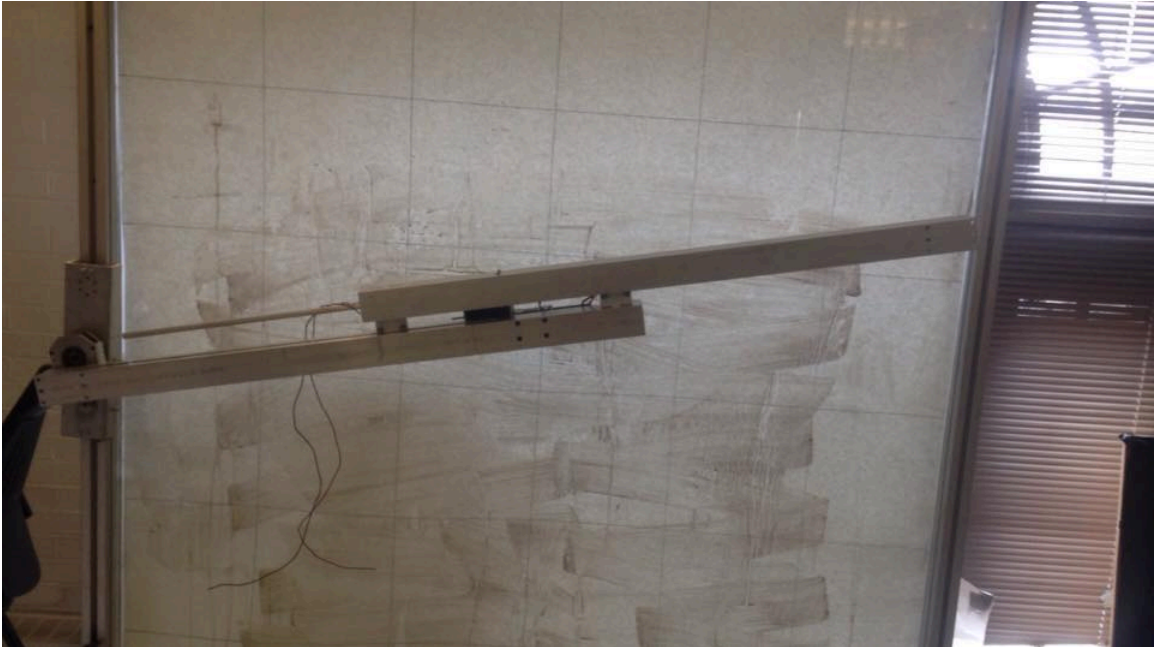
Team B the Monkey Bots

Team mates:

Steph Chen

Ian Rosado

Ian Hartwig



**Figure 1 shows the robot hanging on the window using our passive gripper. This design uses the moment arm and weight of the robot to create a friction hold on the window.**

### **Individual contribution**

This week I worked on building a new cleaning unit which uses rolling paper towel. During testing we found that the cleaning unit would get saturated by dirt no matter how much liquid we add to it. To fix this problem I decided to design a system that would have the ability to refresh the contact area with the window. As such this method does not require any liquid to be added to the robot and should position us nicely for the environmentally friendly award.

### **Team work**

I worked with Ian Rosado to redesign and build the motion slide which moves the cleaning unit along the arm. Ian Rosado also worked on the new passive gripper design with Steph. It is pictured in figure 1. Figure 1 shows the first time that the robot has held itself up on the window.

Ian Hartwig worked on developing stepper driver code. This allows for us to control the stepper drivers from the st discovery board we are using.

### **Challenges**

The main challenge that we are facing is the limited amount of time we have left in the semester. The robot has to be ready in 3 weeks.

We have also run out of budget, due to several parts breaking during manufacturing and higher than expected shipping prices we have exhausted our budget.

The gripper design needs to be finished.

### **Plans for next week**

For next week we plan to finish the robot and show that we can successfully clean a window at the weekly demo.

My individual goal for next week will be to develop the control software for the robot so that it can operate autonomously.