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Progress Report 1

Our two weeks back after the break has been hectic. We decided that adding a sonar sensor would be in our best interest for AI programming. To do this though, we had to completely redesign the physical layout of PiBot and the last two weeks have been just that.

Firstly, we bought acrylic sheets to make the robot's base larger. The recent addition of the sonar sensor required we add about three inches of space and by making a right angle with the acrylic on the front mount of the PiBot chassis, we were able to add an upright mount that houses both the camera and sonar sensor. On top of adding mounts for both sensors, we permanently mounted the pi case to thle acrylic sheets. Overall, PiBot has a studier appearance and looks more reasonable as a finished product. Also in hardware, we upgraded from a breadboard base to a motor control. The reason for this is now we can add the sonar sensor and power it using the batteries that power the engine without crowding and potentially ruining our breadboard.

Moving away from hardware and into the software aspects of the project, we created a ping module that will mesh with a networking protocol that is currently in progress. We have coined the abbreviation HTPP (Hyper Text PiBot Protocol) for our protocol. The module allows us to incorporate any lag between the PiBot and interface as the user drives around. This feature was just added to the scope of the project last week because we are still waiting for hardware to come in to begin object detection with sonar; we are waiting on female to female connection wires.

After a long break, we are ecstatic that we got to such a good stopping point last semester. We do not have to waste time going through code we wrote last semester because we abstracted the hardware and software components so well. It is rewarding knowing we created a piece of software that can have components developed in such an abstracted way and we look forward to doing just that this semester.