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IT-209

Professor Ostrowski

Milestone One

**Project Proposal**

The robotic application that I will be designing for the Final Project this semester is an entertainment toy for cats. The robot will emulate a rodent being in the house and supply noises, quick bursts of speed, and changing lights to pique the interest of the animal. By using contact sensors on the robot, the robot will rely on its closed loop control system to creatively adapt to its ever-changing environments. These sensors will communicate information on full-contact or close-contact points to the robot’s intelligence, in order to be relayed to the actuators for a physical reaction to occur.

The robot will also come with a home that is only accessible by the robot. It will use UV to communicate to sensors on the beak of the robot, to help it ‘home in’ and align for entrance to the robots dwelling. The robot will run on a timer and then return to this home, so that the animal does not become bored by too much association/exposure. The closed loop controller in this robot will be the major difference in what is offered by competitors. Other automated solutions to this point are still offering a small sample space of what the entertainment toys are capable of doing and thus, are losing the interest of the animals they are designed for. Combining this fact with the home that the rodent returns to, which is inaccessible to anything else, will keep interest piqued longer than any other toys.

This solution will frequently change its combinations to make new noises, velocity burst distances, and lights so that the animal will not become easily disinterested in the toy. There is a very popular trend in animal care and different ways to spoil the creatures we care about. This robot will be a hit with the community that is looking to entertain their furry friends while away at work all day.