Robo-chicken

For the future invention challenge team 1138 Eagle Engineering decided to do something fun based on something that everyone loves: chickens. Everyone loves chickens because of how they move and flap around like fools, so we incorporated that into our robot. It is a fun design based on an actual chicken’s body. The main difference is the base, which is controlled by two motors; one controlling an omni-directional wheel for steering and one motor powering two wheels used for driving. It can move in a near perfect circular pattern and forwards. To prevent it from falling over it has a bottom base with small stands that keep it from tipping. Located inside the robot hidden but still easily accessible is the battery pack and the brain with all the wiring neatly attached to the inner frame of the robot. This robot even has a brain of its own as it is fully autonomous with two bump switches and an ultrasonic rangefinder. The ultrasonic rangefinder is based at the top of the robot in the “head” for two very important reasons. It is the closest spot to the human or any other object that it might encounter and they somewhat resemble eyes giving it more of an organic rather than robotic feeling. The ultrasonic rangefinder helps the robot to “see” its surroundings and more importantly, the person playing with it. It can specifically go to the person and then move in circles around the person while being a silly and fun toy. The two bump sensors are strategically placed in the front of the robot so if it bumps into and object it turns to the opposite side of the switch that was hit. The two “wings” located on the robot are each controlled by a servo motor allowing it to rotate around randomly to give the appearance of flapping like a normal chicken would. The arm is a little bit lose to give it the ability to wave while it flaps making it a little sillier and a lot more entertaining. We decided to name it Robo-Chicken, and everyone on the team finds it very amusing as we play with it often.