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Using Arduino to Train Rats Through Weave Poles ARMANDO GUTIERREZ, CALVIN BERGGREN, SCOTT BAILEY, Texas Lutheran University — Animal trainers teach tricks to animals by giving them feedback on whether or not they are following the task correctly, in which the animals hear a sound from a clicker to convey they are either following or not following the correct task, depending on the technique. However, this type of tactic for training animals has not been scientifically analyzed. An experiment about training rats through weave poles was organized to test whether feedback improved their learning. The apparatus used was a wooden box equipped with PVC pipes that had photodiodes and IR LEDs to create beams for the rats to break. The electronic sensors for each beam are connected to an Arduino microprocessor which will keep track of the path that the rats take and provide feedback with tones based on whether or not they follow the correct path through the poles. The presentation will focus on the design and construction of the apparatus.

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