

Laila Buchler & Rachel Fasbender
Altered Halter

The purpose of our project is to create a more useful, multipurpose, and comfortable dog harness for people with visual impairments. We have done lots of research and have constructed a harness that we believe will be more practical for blind people to use, and will increase their mobility and interaction with their environment. Our project includes many prototypes, such as an accelerometer (measures gravitational force in x, y, and z axis) prototype which is mounted on a harness. This circuit includes a piezo buzzer to warn the visually impaired person when there are steps in front of them. Our other prototypes which include LEDs and a servo motor are to demonstrate how we are using light sensors to turn LEDs on so that in the dark the blind person becomes more visible to cars and other passer-bys. The servo motor circuit is a prototype of how we will be using pressure to signal the dog when it needs to turn left or right or when the dog needs to stop or go forward. We built the servo motor prototype to show how the harness which in theory would be able to connect to a smartphone could lead the dog by directing it to a certain desired place of the user. Lastly, we have created a model dog which has been assembled of cardboard to display and present our harness.