

Marcellina Owusu Ansah

Professor Annexstein

Senior Design

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### Arduino Echolocation Robot

The purpose of this project was to help those that use the library, locate sound and identify the significance of the sound. Another purpose was to assist individuals with disabilities such as deaf individuals, to assist in circumventing more effectively than the current status quo. My main role in this project was writing the code. This was a bit more difficult than I originally anticipated. Writing the code to move the robot upon hearing sound, whether towards or away, was a lot harder to do especially since I did not have direct access to the robot.

My partner worked on putting it together and setting it up to move accordingly. A lot of research was put into the code and certain things were altered based upon the research. For instance, we included the LED light to distinguish good sound versus bad sounds. Our original plan was to simply have the robot move towards the sound if it was good and away if bad. Overall, I would deem the end result of the code as the success and the trial and error process of writing the code as the obstacles I kept running into.

Our group accomplished our goals of: creating a library that determines the intensity and significance of any detected sounds, using the library to initiate movement toward or away from any identified sounds, and accurately passes all usability testing. My knowledge of group work expanded on another level throughout this project. The need for proper communication was emphasized because we weren't able to meet in person on a daily or weekly basis. Working on this remotely would've been extremely challenging if the communication was not on par.

Throughout our lives we've been made to believe that in-person work was the best and, more likely, the only method that works. However, whether in person or remote, proper communication is the most important thing. This one thing can improve or impair any project or work. I would say the only aspect of teamwork that was not successful for us was efficiency. Due to some things outside of our reach, we were unable to be as efficient as I believe possible. I believe my teammate and I shared an equal amount of responsibility in this project. Building the robot and ensuring the parts are properly connected in order to move and hear sound took nearly as long as creating the code.