**Documentation Guide (2019)**

Instructions

Please fill in the form below and upload the requested files to the hard drive. Rename the folder to /ProjectName\_TeamName\_2019

Project Information

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| --- | --- | --- | --- | --- |
| Team Name: | BestTeam | | | |
| Project Name: | ChairNav | | | |
| Tools and Technologies: | Arduino UNO, Ultrasonic Sensor | | | |
| Description: | We designed ChairNav, a system that can detect obstacles near a wheelchair and notify the user through haptic feedback. This was accomplished by using ultrasonic sensors that were installed on the wheelchair to monitor for obstacles, with haptic feedback actuators that activate to notify the user.  Using this system, objects that are within 2 meters of the wheelchair elicit a slow pulse on the corresponding side of the wheelchair. As the object gets closer, the pulses increase in frequency to warn the user of an impending collision.  This design has both entertainment and practical value for individuals who use wheelchairs. It can be used to create an experience such as navigating a maze while blindfolded, using only haptic feedback to guide them. In a more practical sense, this can be beneficial for aiding individuals who use wheelchairs to navigate more safely by increasing awareness of surroundings, particularly in blind spots. | | | |
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Archive List

1\_Overview

* Documentation Guide
* Waivers
* Licenses
* Design Documents

2\_Code

* Original Code
* Executable Files

3\_Art

* Images
* Models

4\_Sound

* Audio files (voice-overs, music, narration, sound effects)

5\_Media

* Photographs
* Videos