For many people the sense of touch is a vital sense giving us feedback about this the touch our bodies, but what if your sense of touch could also tell you what is nearby, the direction to your friends, or even that another car was in your blind spot? The ‘Sixth Sense’ Collaboratory enables an extra-sensory perception of distance for the visually impaired or in situations where additional distance information is needed without disrupting the user’s sense of sight or hearing. This technology could be used to better inform drivers, bicyclists, members of the blind or deaf community, firefighters, etc. of the world around them without disrupting, or relying upon their sense of sight.

Our technology leverages the sense of touch to feel the world around the user through the use of distance sensors, and small haptic modules placed around the body. The distance measurements are made using low cost, ultrasonic range sensors. These modules operate much like the sonar on a submarine or aircraft to detect the world around them. The haptic feedback is currently applied to the neck area, via a small data collar embedded with vibrational modules to provide unobtrusive distance data to the user.

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