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CS 4591-A

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Project Deliverable #1: User and Domain Research

Part 1: Domain

For the domain of this assignment, I would like to focus on pet ownership. As a student dog owner, I believe that several aspects of pet ownership could be significantly improved through wearable audio devices: namely dog-walking, pet-feeding, stress-monitoring, and environment-monitoring to maximize the comfort of pet owners and their companions. Among the many things that dog owners often overlook while walking their dogs are the condition of the ground they are walking on, how stressed their dog might be, whether or not they brought dog bags, and how thirsty or hungry the dog is before leaving: all factors that could significantly play into a walk.

Part 2: Specific user needs

One major problem dog walkers often encounter without even realizing it is hazardous ground conditions. Hot pavement, salted/icy sidewalks, and muddy ground can often harm dogs or cause them to track mud indoors. Perhaps a collar with an infrared thermometer pointing toward the ground in front of the dog paired with an in-ear monitor or mobile app that notifies a user when hazardous conditions are met (volume of sound scales with rate of change of temperature, pitch scales with temperature) would give a dog walker peace of mind and an extra layer of protection while walking their pets. Additionally, an EEG- or blood pressure monitoring implement on a collar might alert a user via mobile notification or in-ear monitor notification when their pet is stressed before the dog walker notices, giving them more time to prepare and react. Perhaps these implements could be held in an expandable leash handle along with dog bags, and the user might be notified when there are no bags remaining so that the walker doesn’t find themselves in a situation without any bags.

Part 3: Potential user group & persona

Users of such a device would likely be tech-savvy dog owners, unexperienced dog owners, owners of reactive/aggressive dogs, and those that enjoy training dogs. One hypothetical user persona would be Josh: a tech-savvy, 20-something college student living in an urban environment with a reactive dog. He works part time while taking classes, lives in a fraternity house, and is hesitant to let others walk his dog due to her reactivity. He’d like to be able to better choose walk routes based on environmental conditions, more easily calm his dog on walks, not forget to bring dog bags on walks, and trust others to walk his dog.

Part 4: List of sources

* <https://www.banfield.com/pet-healthcare/additional-resources/article-library/safety-tips/summer-heat-can-be-murder-on-your-dogs-paws>
* <https://www.thedodo.com/close-to-home/dogs-salt-road>
* <http://www.thundershirt.com/thunderease.html?gclid=Cj0KCQjw3v3YBRCOARIsAPkLbK7k45-A0kTZ01PuwsewybXB2mo3P5vJmL93LvEhO_WkqyfHX9yXT8MaAnenEALw_wcB>
* <https://muttabouttown.com/2013/08/18/leash-reactivity-its-trainable/>
* <https://www.theverge.com/2012/8/14/3242820/heat-sensing-dog-collar-ams-alerts-dog-caller>