Juan Cortes

CSC 4720

Feb. 7, 2020

Assignment #2

Photography for Everyone: Improving and Creating Ways for Disable People to Take Photos

Aside from programming, photography is a growing passion of mine. I always get ecstatic when someone asks me about photography and the process of taking photos. Whether it's taking photos with a Digital Single-Lens Reflex camera (DSLR), Mirrorless camera, or a Film camera, there is a process in taking photos, handheld or not. A couple of decades ago, people used disposable camera. Now, people use their smartphones to take 1000 photos in one day. That said, most people don't use the cameras I listed above as much anymore aside from the smartphone. Only professionals or hobbyists use the DSLR and the other cameras. That got me thinking. How can everyone enjoy photography or find a passion in photography? The first audience or people I thought of were the disabled, specifically motor impaired people.

Who are motor impaired people? I categorized this as people who are permanently in a wheelchair, missing a limb, paralyzed to some degree, etc. I also include the blind into the audience. I don't have any relationships with disabled people in my immediate family, but I think photography is something that should be enjoyed by everyone. That is my thought focusing on this audience. That said, the problem I want to study and possibly find solutions, is to improve or create easier and better ways for the motor impaired to enjoy photography using technology.

To my surprise, I found an organization that has a vison to help the motor impaired with photography. That organization is the Disabled Photographers' Society. The Disabled Photographers' Society is a registered charity formed in 1968 to help make photography accessible to those with disabilities. The charity is run by a team of dedicated volunteers, most of whom are disabled photographers themselves (Home-DPS). Looking at their site, DPS hasn't made any equipment, but they have created DIY projects using existing camera equipment such as the Manfrotto Magic Arm Kit, Novoflex PISTOCK-C Chestpod, Manfrotto Flexible Arm. Something interesting I found on their site was the Conceptus Bite Switch and the Conceptus Tongue Switch. Both the bite switch and tongue switch are typically used by skydivers and free fallers who need hand-free access to the camera shutter. Despite this, there isn't any technology for photography I could find that specifically caters for the motor impaired. One either must use existing camera equipment and use it for a DIY project or have a company/organization to custom make equipment.

Apart from DPS, I did find two other sources. One explored photography for the blind. The other explored smartphone photography for the motor impaired. In "Supporting Blind Photography," Jayant et al. developed an audio feedback camera iOS app, EasySnap, to assist the blind subjects and to explore the general paradigm of help that the blind subjects need. They also created PortraitFramer, a more in-depth portrait framing app to help frame and orient multiple people in a photograph, with different audio and vibrational cues. From their pool of 118 blind subjects, 84 had recently taken photos. It was interesting skimming that paper and learning that there is a presence of blind photography with blind photographers on multiple platforms such as Facebook, Flickr, etc.

In "Understanding the Accessibility of Smartphone Photography for People with Motor Impairments," Mott et al. explore the challenges the motor impaired face when it comes to mobile photography. They interview the motor impaired subjects on strategies they have used to take photos. Mott et al. also interview view them on how their own perceptions/setbacks have encouraged or discouraged them on taking photos. One of the things they explored is better touch gestures and voice commands.

Currently, I think technology to better improve photography for the motor impaired is unexplored. I believe there can be potential in creating technology such as sensors, interfaces, applications, etc. to control the camera someone is using. There are people that want to enjoy photography, but they often get discourage because of their situation and impairments.

Works Cited

"Home-DPS." *The Disabled Photographers' Society*, www.the-dps.co.uk/.

Jayant, Chandrika, et al. "Supporting Blind Photography." *The Proceedings of the 13ᵗʰ*

International ACM SIGACCESS Conference on Computers and Accessibility – ASSETS

11, 2011, doi:10.1145/2049536.2049573.

Mott, Martez E., et al. "Understanding the Accessibility of Smartphone Photography for People

with Motor Impairments." *Proceedings of the 2018 CHI Conference on Human Factors*

in Computing Systems - CHI 18, 2018, doi:10.1145/3173574.3174094.