Jonathan Ganz, Elizabeth Parent

Design and Concept of the LizardSkin

In making this assignment, we tried to think of something that not only fulfilled the criteria of the assignment but also would result in something we were truly invested in. Through iteration of ideas from a silly mocking of late Victorian era clothes to a bio—mimetic lizard frill, we eventually settled on the idea of a small wearable piece that when worn would warn people who were talking to you when they would be infringing on your personal space. Inspired by the countless individuals that don't understand the concept of a personal bubble and the people too polite to tell them to their face, this small machine solves your troubles by simply freaking out and opening its frills; not unlike a frightened lizard. This truly gives our wearable tech a personality of its own. By frills around the shoulders opening suddenly, it is defensive and communicates to those in the conversation that the wearer may be uncomfortable. The observer can then modify their actions accordingly.

With the key idea being the detection of distance and moving servos to react to the change, the actual components were easy to visualize, whereas its construction and aesthetic were harder to nail down. With the need to be nice enough to wear in mind, we needed to focus on having the parts aligned properly at all times of wearing and the actual structure of the wearable strong enough to support the servo movement without allowing it to become disrupted. We ended up going with foam inserts for the shoulder straps, so they would be firm but malleable. Pockets in the front and back of the harness hold the Arduino and rangefinder sensor. We used bamboo skewer sticks to give shape to the frills and we ironed some thin green fabric to form pleats. This way the frills open and close without becoming messy.

Division of Labor:

Jonathan – Circuit building, main code implementation, assistance in harness design, sensor research

Elizabeth – Main harness design and building, assistance in building circuit, storyboards, sensor research

*note – We could not find the object of the ultrasonic rangefinder in Fritzing, so it is missing.