Your Experiment documentation will be shared in the form of a blog post on the class blog. You can log in here: [https://blog.ocad.ca/wordpress/digf6037-fw2020-01/wp-admin (Links to an external site.)](https://blog.ocad.ca/wordpress/digf6037-fw2020-01/wp-admin)Your blog post must include:

* Project title (make this the title of the post too)

Imaginary friend

* Key project image
* Names of group of members if more than one (important!)
* Project description (250 words max)

The imaginary friend is an interactive doll for users to carry outside and inside the environment. By using the home material textile, we are able to fabricate the doll into a rabbit appearance. It is an imaginary friend for our childhood, to play with us outside and provide accompany in darkness space. The project uses a photoresistor to detect the intensity of light as the input value and flashing LEDs and servo motor as the output. The LEDs are installed on the above the head, inside the eyes, and in the neck. There is a blue LED inside the hat of the rabbit, orange one in the pom pom necklace and a red LED behind the right eye of rabbit. As the doll in a different environment, it has three states. Firstly, when the doll is outside in a daylight environment, it will move slightly, which we consider a happy state. Secondly, with dark indoor space, the doll will flash the LEDs to draw attention to the users. Lastly, while in a lighting indoor situation the doll is moving and flashing LEDs together. We use paper basket to hide the breadboard toward a better looking of our project.

* Experience Video (1 minute max)
  + This should focus on the overall experience of the work from the perspective of the intended audience. (inside or out)
* How It Works Video (2 minutes max)
  + This video focusses on the "behind the scenes" look at the technical and design strategies used
* 2-5 final project images
  + focused on how the project interacts with "users" and the site
* 2-5 development images/videos
  + Documenting the technical development
* Link to the Arduino code hosted on Github
* Circuit diagram, created in Fritzing or Tinkercad
* Project Context (300-500 words)  
  Write about 2-4 references to related articles, papers, projects, or other work that provide context for your project. Discuss the relationship between your project and these references. Be sure to include a bibliography and use a consistent citation style.

Arduino can enhance the artist's creativity in interactive media by providing an open-source electronics prototyping platform. Using microcontrollers, LEDs, sensors, etc., artists can create interactive objects and environments to shape an interactive artwork (Shaikh,2). Our project is creating a doll that can interact with the context of inside and outside. As artists, we don't have a background in programming and engineering. With Arduino, we can build it from scratch with limit coding knowledge. Hence, we can focus on creatively designing our toy's interaction in indoor and outdoor environments.

Berglin presents an interactive toy Spookie by combining smart materials and information technology (17). Unlike the traditional computer user interface, engage in mouse and keyboard as input and display as output, Spookie's interaction involves textiles (Berglin, 17). The first generation of Spookie has hidden the mechanical button inside textiles (Berglin, 18), in which our smart toy is similar to this approach. The LEDs and servo motor are inside our doll's textiles, but they can still light and move the textiles. Berglin also mentions that the form and weight are important in the design consideration; for example, if the units look like a pet, the children will take more care of it. This found help us design a cute rabbit as the appearance of our object to attract users.

Many children are afraid of the dark, same with us during our childhood; the most horrifying thing is to stay in the room alone overnight. Most of the kids have an imaginary friend, who play and encourage them. Which inspired us to create this interactive doll, a doll that could glow in the dark indoor environment and move their body to interact with others.

Instead of using a mouse-keyboard-screen-based interface in traditional Human-Computer Interface, artists and designers have always been skilled in applying metaphors when designing systems, objects, or artworks (Mignonneau, 838). The user studies evaluate the computational systems within HCI research; in contrast, artists tend to consider their system as a medium to express their ideas and concepts to the users (Sweden, 241). This project provides an indoor and outdoor experiment for the users to discover how the intensity of light can change our doll's state. It is not controlled or interacted with users' motion directly, but it indeed reacts to the context by bringing it inside or outside, light opening, and closing.

Cited Works

Berglin, Lena. "Spookies: Combining smart materials and information technology in an interactive toy." *Proceedings of the 2005 conference on Interaction design and children*. 2005.

Mignonneau, Laurent, and Christa Sommerer. "Designing emotional, metaphoric, natural and intuitive interfaces for interactive art, edutainment and mobile communications." *Computers & Graphics* 29.6 (2005): 837-851.

Höök, Kristina, Phoebe Sengers, and Gerd Andersson. "Sense and sensibility: evaluation and interactive art." *Proceedings of the SIGCHI conference on Human factors in computing systems*. 2003.

Shaikh, Murtaza Hussain. "Arduino Tool: For Interactive Artwork Installations." *arXiv preprint arXiv:1202.1953* (2012).