

FASHIONING CIRCUITS

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Sep
10
2011

Announcement: Welcome

Posted by kimaknight

Uncategorized

2 Responses »

Welcome to Fashioning Circuits, a public Humanities project related to Fashion and Emerging Media.

Fashioning Circuits was launched in September 2011 as part of a series of independent studies in the graduate program in [Emerging Media and Communication \(EMAC\)](#) at the [University of Texas, Dallas](#). The goal of the project is twofold: to explore the ways in which fashion and emerging media intersect and to work with community partners to introduce beginners to making and coding through wearable media. In *Fashioning Circuits* “fashion” functions not just as a noun to describe cultural trends, but also as a verb, “to fashion,” to indicate the experiential and problem based learning strategies of the project as well as the potential for a diverse range of students to fashion themselves as members of the publics and counterpublics of the future.

This blog is one of the ways in which the work of the project is articulated. The blog content includes

- Coursework – resources from university courses, both independent study and formal classes.
- Emerging Media – examples and analysis of blogs, social media, mobile applications, etc. as they pertain to fashion.
- High Fashion – information and analysis of haute couture and runway iterations of wearable media.
- History – historical impact of science, technology, and media on fashion.
- Identity – analysis of the impact of fashion and emerging media on identity, including raced, classed, gendered, differently abled and sexualized bodies.
- Project News – information about Fashioning Circuits activities and press coverage of the project
- Representations – representations of fashion in media, including art, media, games, social avatars, etc.
- Wearables – analysis of developments in wearable media, smart textiles, etc.
- Workshop – descriptions of wearable media projects and detailed tutorials.

Aside from the blog archive, the [editorial team](#) is also active on Twitter. Search for the hashtag [#fashioningcircuits](#) to see all of the interesting resources we are finding and sharing.

If you would like to work with us on planning a community event, please contact kim.knight@utdallas.edu If you would like to volunteer your time at one of our community events, please join our Facebook planning group at <http://facebook.com/groups/fashioningcircuits>



Photo “*electronic led light dress at the museum of science and industry in chicago*” by Flickr user David Hilowitz

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Apr
10
2015

Event Recap: Fashioning Circuits Meets the Brownies

Posted by kimaknight

Community events

No Responses »



Getting serious with art & code

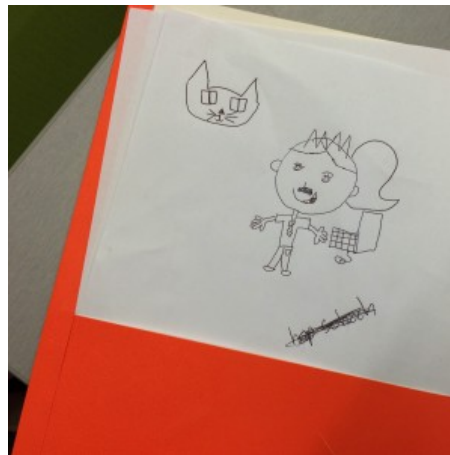
On March 31, 2015 we had our first community event of the year and our first ever workshop with Brownies, i.e. Girl Scouts who are in the 2nd and 3rd grade.

Twenty Brownies joined us on campus at UT Dallas for programming that was focused on giving the girls a glimpse of the role of women in computing and on playing with code. We knew that for this age, we should try to move as much as possible away from abstract concepts, so we developed some new activities that we hoped would connect and excite the girls.

Activities included drawing pictures of the first programmer, learning about Ada Lovelace, and a rousing game of "spot the programmer" where the students were shown slides with two images and they had to pick the one they thought was a programmer. We finished up by showing some interesting projects that bring together art and programming and then did some very basic activities with the Lilypad Arduino and the blink sketch.

Highlights from the one hour event included:

- General amazement that there are elevators in college.
- The student that informed us that hackers are BAD. Clearly she is getting some early web safety training somewhere. This was a great opportunity to break down what "to hack" means and how it can sometimes be used for good (as in our example of Ying Cracker, the Chinese hacker who helps people protect their data).
- 30-second dance party as we discussed Shakira's participation in Hour of Code.
- The student who used the foil wrapper from the candy we handed out as conductive material in her circuit. Very clever!



One of the activities was to draw a picture of the first programmer. There were a lot of mustaches, but this was our favorite! We suspect some revision happened after we talked about Ada Lovelace.

At the end of the evening, the students took home UT Dallas folders that included handouts to help parents understand what we worked on and further resources in case the girls wanted to build on our very basic

introduction.

Included here are the slides we used in [keynote \(35MB\)](#) and [.pdf \(25MB\)](#) form. They are licensed under a [Creative Commons BY-NC-SA license](#).

Thanks so much to our fantastic Fashioning Circuits volunteers: Lauren, Laura, Lisa, and Patti! Thanks also to the UTD A&H Grad Student Association who provided us with folders left over from their conference!



Logo designer and volunteer, Lauren Shafer. Not pictured: the elusive Lisa Bell



Laura Pasquini and Patti McLetchie model our new Fashioning Circuits t-shirts before the Brownies arrive.



Tagged with: [ada lovelace](#), [brownies](#), [girl scouts](#), [history](#), [shakira](#)

Feb
23
2015

Student Project: LED Safety Jacket for Dogs

Posted by kimaknight

Coursework, Tutorials, Wearables, Workshop

No Responses »

This blog post was written by, and highlights the Fall 2014 final project of, EMAC undergraduate student Justin Ozuna. Follow him on Twitter @TheOzunaVerse. The assignment for which he made the project can be found [here](#).



justinozuna • 17 months ago

Follow



I made this blinking dog jacket from scratch using an arduino, conductive thread and LEDs. It's designed to keep dogs and their owners visible when they're outside walking at night.

22 likes

6 comments

Pet ownership is a way of life in the United States. According to humanesociety.org, more than 80 million dogs are pets in U.S. households. Eighty million! For perspective, there are an estimated 316 million people living in the United States. Nearly 47 percent of households own at least one dog, and the upward trend doesn't show any signs of decline in the near future. In fact, pet ownership has nearly tripled since the 1970s.

Where there are numbers, there is a thriving industry. Americans will spend \$58 billion on all pets combined this year. Walk into any store and there's likely to be an aisle (or two) of pet food, snacks, toys and accessories. What you won't be able to buy in the store, however, is time. After a long day of work and a full schedule of evening activities, Fido is ready for a long walk. The problem is that there's not always time to take your pet for a stroll in the neighborhood before the sun goes down and the stars fill the sky. Walking your pet at night means you're at the mercy of overcautious drivers and hyper-focused neighbors to stay safe.

[Continue reading »](#)



Tagged with: Dogs, LEDs, pets, safety

Feb
16
2015

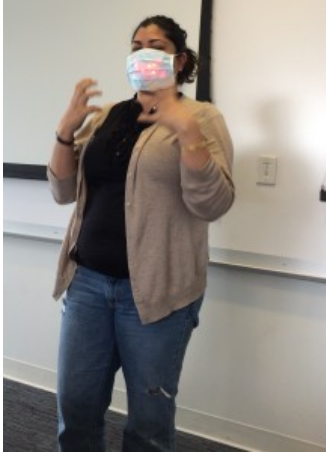
Student Project: Meditation on Vaccination

Posted by kimaknight

Coursework, Health, Workshop

No Responses »

This blog post was written by, and highlights the Fall 2014 final project of, EMAC undergraduate student Nilufer Arsala. Follow her on Twitter @NiluferArsala. The assignment for which she made the project can be found [here](#).



EMAC undergrad Nilufer Arsala models her Vaccination Mask

Artist Statement

My final project is meant to be an artistic statement about the most recent [anti-vaccination movement](#). Parents can have many reasons not to vaccinate or to delay vaccinations of their children. Some cite religious reasons and some may be more concerned about the health risks of the vaccines, as opposed to the actual diseases they are meant to protect against. It seems that while the anti vaccination movement had gained some steam, recent findings about the resurgence of disease and the [retraction of a paper](#) linking vaccines to autism by medical journal [The Lancet](#) may be slowing the trend down a bit.

This project struck a chord with me because I am a first time mom with a very young son. The first year of his life I too doubted the amount of vaccines and asked the doctor repeatedly how safe they were. I even went as far as to call all of my friends who are doctors and ask their opinions as well. In my experience there were a couple of things that set my mind at ease in regards to making sure my son received his vaccinations in a timely fashion. The first was that I received vaccines as a child as well and seemed to turn out ok (I think?) and the second was that these vaccines really can protect him from getting very, very, sick. Of course every parent has the right to choose what is best for their family and this piece is not meant to serve as judgment one way or the other.

The piece itself comes in the shape of a surgical mask. Embedded in the mask are red LED lights that blink in unison and are in the shape of an "X". The lights paired with the mask are symbolic of trying to stop the transmission of disease.

How to make it!

[Continue reading »](#)



Tagged with: [anti-vaccination](#), [vaccines](#)

Jan
12
2015

Wearable Quadcopter: Is This Our Wearable Future?

Posted by kimaknight

Hardware, Wearables

No Responses »

By: Jonathan Gonzalez



The Nixie is a wearable quadcopter that can take flight with a simple hand gesture, position itself to take a photo or video of you, and fly back to your wrist. Team Nixie took 1st place in [Intel's Make It Wearable](#) competition with a flying prototype, and will receive \$500,000 to continue their endeavor.



Christoph Kohstall, CEO and Founder of Nixie, is an avid rock climber who had long tinkered with drones, but disliked the idea of having to pilot the drone while he was rock climbing. His hands are obviously busy while rock climbing, so controlling the drone became a distraction. He created the Nixie, which is light, wearable and hands-free. The prototype is said to be programmed with a few modes including: “boomerang,” “follow me” and “hover.” “Boomerang” launches the Nixie, which takes a

photo or video and immediately returns to you. The “follow me” mode keeps the Nixie close to you as you move, while the “hover” mode leaves the Nixie at a stationary vantage point. Joseph Flaherty at [Wired.com](#) states “Expertise in motion-prediction algorithms and sensor fusion will give the wrist-worn whirlybirds an impressive range of functionality.”

Kohstall has a background in rock climbing, so the Nixie was initially envisioned for use in outdoor adventure sports. However, during a [video interview](#) with CNBC Kohstall states “Nixie can be the next generation of point and shoot cameras”.

This could change the way we look at photography all together. Aerial photography is becoming more popular and the Nixie's self flying features can open the doors to even the most amateur user. The simple user interface can make it accessible to even the most novice tech users, such as children and grandparents. Prices are predicted to be “a bit more than a GoPro”, but no hard prices or dates have been set as of now.

What does Nixie winning Intel's [Make It Wearable](#) contest say about our society? A wearable drone is a fun and cool idea, but the runner up, Open Bionics – Low-Cost Robotic Hand, is focused on helping amputees by giving the gift of a low priced, nearly fully functional robotic limb. We are talking the beginnings of cyborgs! Is technology so mainstream (for lack of a better phrase) that we should focus our efforts, not to mention funding, on something to help us show off our Instagram-worthy adventures? Is getting a better selfie and auto-flying cameras the next big technology we should go after? I'm not so sure. Don't get me wrong, I am a amateur photographer/filmmaker and love new and exciting gadgets to play with. But, how are innovating self flying drones helping technology and wearables get to the next level? Can we even classify this technology as wearable? I don't know the answers, but I'm curious to see what comes from all of this.

Sources:

[Nixie Website](#)

[Intel's Make It Wearable](#)

[Nixie Facebook](#)



Tagged with: Cameras, drones, intel, make it wearable, nixie, open bionics

Dec
10
2014

CO Sensor Hat

Posted by C.G. Lewis

Coursework, Emerging Media, Environmental, Health, LED, Wearables

No Responses »

by Christopher G. Lewis

The final results of creative projects often differ greatly from the original concepts. It's certainly true for my EMAC 6372 final project, the "Carbon Monoxide Sensing Hat."



The first concept I tried to develop focused on noise pollution and frustrated me completely. It was a creative and technical non-starter with only one positive, NO ARDUINO CODING. I stubbornly persisted with it because my fearful dread of code outweighed the logistics of a proper concept I actually felt strongly about.

It only required forcing existing tech into a hoodie.

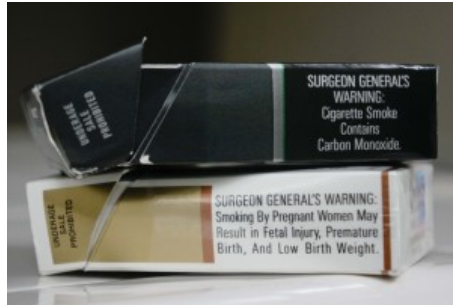
During the third week of November, still mentally bankrupt over my first idea, I realized the anniversary of the day I started smoking was Wednesday the 19th. Had it really been 20 years since Nov. 19, 1994? How many cigarettes is that? What do my lungs look like? How much money spent?

Let's see... 1 – 2 packs per day at approximately \$5 per pack (\$1/pack in 1994, but as much as \$10 in recent years) I'll guess \$7.50 per day spent for this calculation (about 1.5 packs/day).

$\$7.50 \times 365 = \$2,737.50$, $\$2,737.50 \times 20 \text{ years} =$

\$54,750

I need to quit, but I've tried just about everything with limited to no success. I know cigarettes are bad. It says so right on the pack.



For health reasons, I typically only smoke the ones that complicate pregnancy

Then inspiration struck. I found my final project concept.

"The Black-Lung Canary CO Sensing Hat"



GasCap on a wire bust of myself I made years ago



GasCap setting off CO alarm LEDs

The name "Black-Lung Canary" references the small birds miners once used to detect deadly gasses underground. The hat functions similarly to the bird, but hats don't die. Among the thousands of other chemicals in cigarette smoke, carbon monoxide (CO) is a proven killer. It's the same gas released from a car's tailpipe.

Parallax, Inc. produces an Arduino compatible gas sensing kit. The board comes with two sensors, the MQ-7 (Carbon Monoxide) and the MQ-4 (Methane).



<http://www.parallax.com/product/27983>

The gas sensor board functions by heating up the MQ-7 sensor to purge particulates and then runs a sensing cycle. It must be calibrated by adjusting the alarm trip level in conjunction with the sensitivity level. I set both to about .8V, sensitive enough for smoke, but not overly sensitive. That took quite a bit of time as I don't smoke inside my house and cold temperatures will affect the reading.

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Dec
08
2014

Star Lady – Guardians of the Galaxy Jacket

Posted by Suzanna Brooks

LED, Wearables

No Responses »

Guardians of the Galaxy: A thrilling tale of adventure, thievery, danger, romance, and incredible heroism in the face of great evil. The original Marvel comic book characters—dating as far back as 1969—have been changed several times over the years. New stories and new timelines have followed the first tales. But one thing has remained the same—except in short-lived alternate timelines, the leader of the Guardians has always been a man.

In today's most recent iteration of the Guardians of the Galaxy—a fantastic film adaptation by Marvel Studios—Peter Quill of Earth, also known as Star Lord, steals a mysterious orb in the far reaches of outer space and thus becomes the main target of a manhunt led by the villain, Ronan the Accuser. To fight Ronan and his team and save the galaxy from his power, Quill bands together a team of misfit space anti-heroes who become known as the "Guardians of the Galaxy."



[image via IMDB.com]

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Tagged with: adafruit, arduino, Chris Pratt, cosplay, critical making, flora, gender bending, gender stereotype, Guardians of the Galaxy, hero, heroine, jacket, Marvel, Matt Ratto, neopixel, Peter Quill, science fiction, Star Lord

Dec
08
2014

Anxiety Cuff

Posted by aks140130@utdallas.edu

Coursework, Health, Tutorials

No Responses »

By Amanda Sparling

A panic attack is a sudden surge of overwhelming anxiety and fear. Your heart pounds and you can't breathe.

Relaxation techniques such as meditation, controlled breathing, and grounding can reduce anxiety and increase feelings of relaxation and emotional well-being. However, it is not always easy for a victim of a panic attack to be aware of what is physically happening to them at the onset of the attack and therefore they are unable to treat and calm themselves in the moment.

Additionally, panic attacks rarely happen in a controlled or private environment. Being exposed during a panic attack can heighten the overwhelming feelings of anxiety and fear and lead to complications if an attack occurs in an inopportune time such as during work or in a social setting.

Using sensors that measure specific physiological functions such as heart rate, biofeedback teaches an individual who suffers from [Panic Attacks](#) or [Panic Disorder](#) to recognize the body's anxiety response and learn how to control them using relaxation and grounding techniques.

This project attempts to address the needs of a person who suffers from frequent panic attacks or panic disorder by allowing them to be aware of their physiological state in order to reduce the symptoms of a panic attack and aid in reducing the duration of a panic attack. Panic attacks are distinguished from other forms of anxiety by their intensity and their sudden, episodic nature. Through the Anxiety Cuff device a victim can take control of an attack and return to normal functionality as quickly as possible.

A person who is using the anxiety cuff will wear the Polar Heart Rate Transmitter which will measure their heart rate every second.

They will put the cuff on their arm, as pictured below, and go about their usual daily activities.



While an individual's heart rate remains constant, there will be no change in the device and some light to moderate movement and exercise will have no effect on the device as well. However, as the wearer begins to experience the symptoms of a panic attack their heart rate will begin to dramatically increase.

Once the Heart rate increases to an exceptionally high level, the Arduino triggers the vibe board to apply vibration to the pressure point at the underside of the wearer's wrist.

This notifies the wearer that they are experiencing the physiological symptoms of a panic attack and allows them to begin integrating relaxation and grounding techniques to halt the attack at it's onset.



If the attack is acute, and continues to progress the vibrating motor will continue to apply pressure to the wearer's wrist while the heart rate is elevated. What this continued pressure will do is to allow the wearer to focus on the vibration and the physical environment – grounding themselves and allowing them to begin the process of re-associating their internal and physical states to help the attack subside.

Once the heart rate had reduced the lilypad vibe board will turn off, and the wearer can resume their normal activities.



[Continue reading »](#)



Dec
08
2014

Gamer Girl Shirt

Posted by lx124130@utdallas.edu

Uncategorized

No Responses »

My project is a gamer shirt purchased in the boy's section of a clothing store (since there were none in the girl's section) in which I was to place an LED matrix that would display feminine images and print the word *girl*. That was the plan, at least. Then reality hit. I went through a process of researching, purchasing, assembling, and coding several LED matrixes, all with unsatisfactory results. Finally, I switched to an LED cord on the outside of the shirt, rather than the inside, and I have had to use a 12-volt plug-in to make it work.

In her work, "Fashion and Sexual Identity", Samantha Brennan states, "heterosexuality is a position that is so unremarkable among heterosexuals that it becomes invisible as a structure". The same holds true in gamer fashion. Masculinity is the norm and femininity is the other, rendering the feminine invisible. Thus, bright flashing LED seems like a good way to become visible.

The amount of knowledge I have gained from the process is incredible. I began this semester with no experience in sewing, coding, or soldering. Now I feel like I have a beginner's level skill in all three. I honestly enjoy making and maker culture. There is such a wide variety of ideas out there and so many things that can be done and created. I'm sure that I will continue to develop the skills that I have learned in this class and apply them to future endeavors. It was the experience of making that taught me the most about maker culture and how to develop wearable technology. I was able to watch videos on soldering and apply those skills quickly. Ultimately, for my actual finished project, the sewing skills proved to be the most valuable, as hand stitching the LED wire into the shirt was required.



Dec
08
2014

Music Gloves : Reflections by Santosh Vijayakumar

Posted by Sandy Bones

Uncategorized

No Responses »

In a world that is increasingly being made into capitalist societies operating on digital fronts, it is an increasing sense of anxiety towards the future of performing arts that has motivated me to attempt this project. By embedding technology onto an apparel that we, for the most part, only use when we go outdoors, I seek to redefine its purpose.

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