

# SPIRE-EIT 2024



SUMMER PROGRAM FOR INTERDISCIPLINARY RESEARCH AND EDUCATION – EMERGING INTERFACE  
TECHNOLOGIES



## This is the End?



August 3, 2024



Sophie Meronek

Hello Friends

This will be the last post I'll make in VRAC. In 3 days, I will be back in Wisconsin and the REU will be officially done.

This blog will be pretty long and separated into 3 parts.

### The Final Week

The final week has been extremely bittersweet since we are finishing up our projects. I am excited to see the final product, but with that it will be the end of the summer program. For most of the week I have been working on finishing up the paper with Lydia and Harrison, while also finishing up some of the MATLAB code. We had finished up most of the paper by Tuesday and were proofreading. I feel really good about our paper and our project in general. We were able to run the full trivia paradigm in VR with a few bugs, but it was extremely satisfying seeing everything come together.

Today we had the research symposium where we got to present our posters from the summer. I was both nervous and excited for the presentation. This was my first time presenting a poster and I was worried I would do it wrong. In the end, I felt pretty good about how we presented our poster. All of us were able to present the poster well and I felt like we got the main points out. In addition, we had a good number of people come to our poster and seemed pretty interested.

At one point I left to look around at some of the other posters. I was interested in seeing some of the posters from the statistics REU since I am a data analytics major and enjoy statistics. I really liked one of the posters that looked at different time series models and regression. It seemed like an REU that I would be interested in maybe down the line.

### Reflecting on the Summer

Looking back, I am extremely grateful for the opportunity to be a part of this REU. At the beginning of the summer, I wasn't expecting to receive this kind of opportunity, but the moment it became a

possibility, I took it. The summer has been extremely rewarding. I was able to gain new skills in a myriad of different topics ranging from C++ to Unity to MATLAB. And with these skills I was able to meet some of the most amazing people. Everyone at VRAC were extremely welcoming, talented, and was a thrill to be around. I am extremely grateful that I was able to meet them and get to know them.

I also enjoyed getting to know the others at the REU. Coming into the summer, I felt like I had to prove something. They had all gotten accepted at the beginning of the summer and I hadn't, which made me feel like an imposter. As the summer went on, I felt less that way. I enjoyed every second I had with them (even when we fought). I don't think I would have enjoyed my REU experience without them. I don't have a specific favorite activity, but here are a few memorable ones.

- Late night movies and TV shows
- Game nights
- Our trips to Des Moines

Now to our research group. While we had our ups and downs, I enjoyed getting to work with Lydia, Harrison, Aron, and Dr. S. I never would have thought curiosity, as a topic, could make me curious. I also wouldn't have imagined getting to work with an EEG cap and similar software. In addition, this group really pushed me throughout this summer and have helped me grow. We had faced many challenges throughout the summer, but together we were able to tackle them. In the end, I absolutely loved working on this project and wouldn't have wanted it any other way.

### **What does the future hold?**

This summer has really opened my eyes to what I want to do in the future. I has always thought being a professor would be fun because of the teaching aspect, but I also want to do research now. The summer has shown what research is, and it is something I want to do in the future. In addition, because of my experience at VRAC, I am seriously considering coming back to ISU for graduate school. If it would be possible, I would love to do HCI (at VRAC) and statistics in the future.

For the short term, there are potential opportunities for me to continue working with Aron. And I would also be interested in doing some other work with those at VRAC if possible. I enjoyed my time at VRAC immensely and am going to really miss working with everyone.

Well, that's all folks.

Best,

Sophie Meronek



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## Guess Who's Back

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 [July 23, 2024](#)  [Sophie Meronek](#)

Hello

Sorry for the weeklong break, I have been extremely busy. So, let's do a breakdown of the past week.

### Research

We have been making good progress in the research.

#### VR and Muse

Lydia and Harrison have been working on this part more me, and they have been doing a marvelous job. Lydia has figured out the LSL stuff and has gotten event markers sent from the Unity Environment to the Muse Data. I helped then with getting the markers to have specific labels, and we'll see if that will actually show up on Matlab.

Harrison has been working on the timing signal, so we can get the screens to switch and the triggers to happen at a specific time. To do this, Harrison has a sphere going in a circle and it passes through two cubes. When the cube enters and exits there is a trigger event in the Unity Stream.



They have also been working on the Unity Environment and getting the user's input. I don't know what they have been exactly doing, but I think it will be pretty cool.

I'll start helping with getting the Trivia Paradigm into the Unity environment soon.

## **PsychoPy and EEG**

So, the trigger was working in our last test, but like a moody teenager, it has had a mood swing and hates me again. During our first pilot collection last week the trigger decided to not work again. It was really disheartening to see the PsychoPy application work, and then fail because of the trigger code wasn't working. Then yesterday, I went into Forker at noon to work on the trigger. I got it working when the trigger was the only thing plugged in. After that we had another pilot collection period, and everything seemed to be working. The trigger got mad at us and decided to stop working. I tried running the trigger test and that also didn't work. We are thinking that maybe having other things hooked up to the computer is causing it to not work.

## **Matlab**

I have also been working on understanding the Matlab code. Currently we are using EEG Lab and a GitHub folder that preprocesses the data. I have figured out how to read different files in Matlab and convert them into the EEG structure needed to run some of the other functions. We have been able to see a heat map and a line plot of the channels.

## **Life and Activities**

While there has been a lot going on in our research, I am doing other things.

### **Mini Golf**

On Saturday we went to play mini golf. It was a lot of fun since we got to hang out while competing with each other. At one point, I was doing pretty well and was in the lead, well at least in the curiosity group. But in the end, I kind of went downhill and lost my lead to Harrison (who ended up winning), but I still got second (which I wasn't expecting). Following that we played in the arcade at the same place. I won like 100 tickets from 14 dollars and got myself some candy. We then went to a Mexican food spot. I got carnitas and really enjoyed them.

### **Cooking**

I have been doing a lot of cooking which is extremely fun. I finally branched out from my normal easy meals to make and made some chicken legs in the oven. They were really good. I used a spice blend I found at Hy-Vee. It wasn't anything too fancy, but it was extremely fun to do.

Also, on Thursday we had Heliya help us make Baklava. I have never made baklava before and was excited to try it. It turned out really good and it tasted phenomenal.

Well, that's all folks.

Best,

Sophie

# HCI: Heuristics Assignment

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 July 17, 2024  Sophie Meronek

For our most recent HCI assignment, we are to pick 3 heuristics used in decision making and 3 design principles for the heuristics. Then we are to write how we can apply these 3 different pairs into our project.

## Heuristics

Familiarity: Favorable to things that appear to be familiar

### Design Principle:

Having consistent visuals and standards.

### Implementation:

We will keep the format of the screen the same during the experiment. This way we won't gain any undesired data from a surprise unfamiliar screen.

## Heuristics

Affect: Emotions are affecting how we decide something

### Design Principle:

Not including anything that is offensive or give an adverse emotion.

### Implementation:

We have removed or omitted certain trivia questions because of some current events. We don't want anything too distracting for the participants.

## Heuristics

Recognition: Preferring things that are recognizable

### Design Principle:

Create an environment similar to the real world

### Implementation:

We are using a realistic classroom that will be somewhat recognizable to the participants. We didn't want anything too outlandish to prevent shock or any other adverse effect on the participants.

 Blog Posts  1 Reply

# Presentations and VR

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 July 16, 2024  Sophie Meronek

Hello friends

This past weekend was extremely fun. I got to see one of my friends from school and hang out with them. We went to the farmers market and a mall. Also some of the others from Ames joined us at the farmers market in Des Moines. It was extremely hot and draining, but it was a ton of fun.

Then on Monday, we worked on VR and figuring out how to sync the data streams from the Unity app and the Muse headband. Lydia and Harrison did an amazing job looking into the possible ways we could do it. We also worked on our presentation for CUNY which is next week.

Well that all,

Sophie

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## Heel Click for Celebration

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 [July 12, 2024](#)  [Sophie Meronek](#)

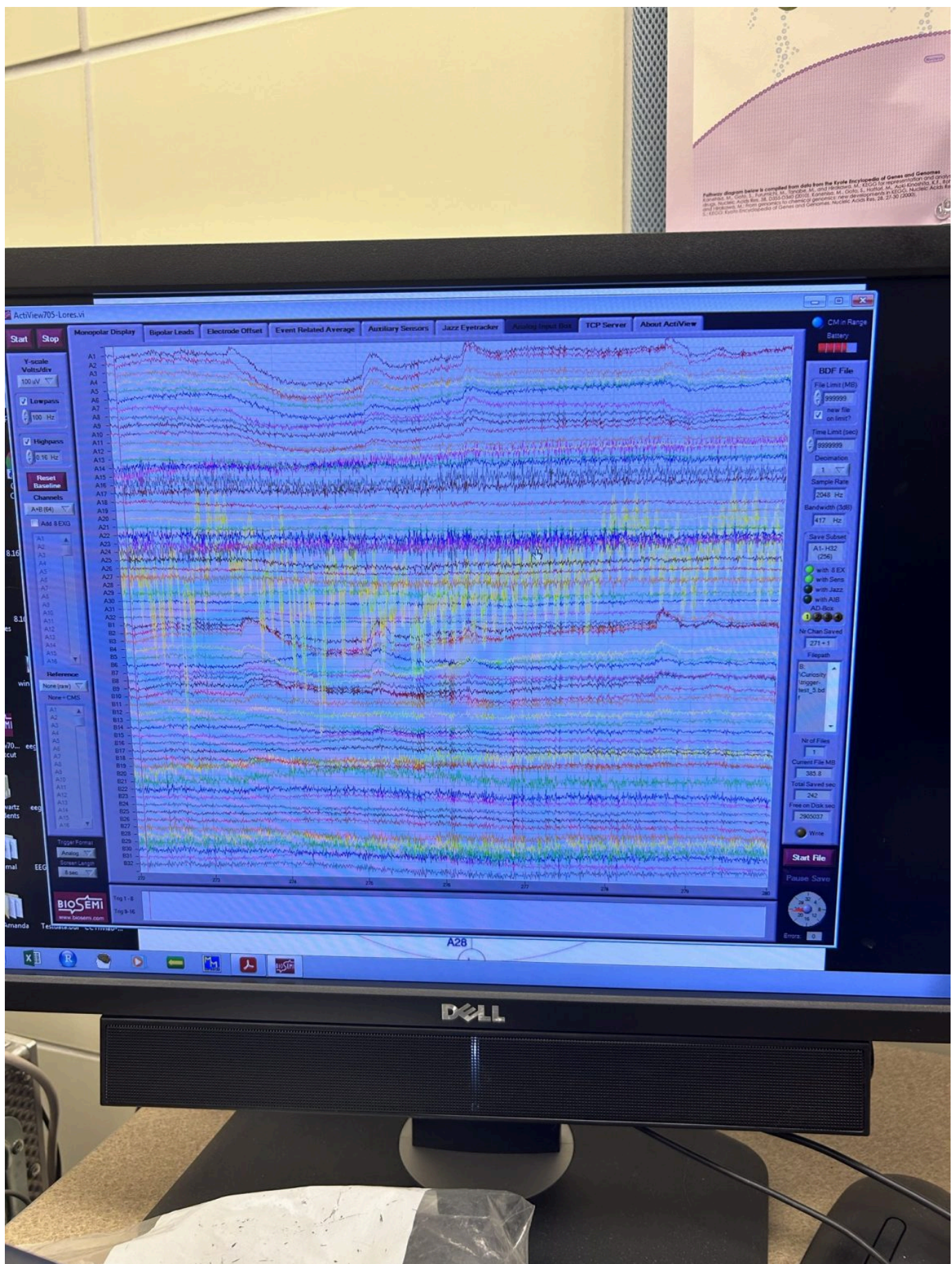
Hello friends,

I am extremely happy!!! Yesterday during our test run of the trigger again, dots appeared in Biosemi. These dots were where the trigger was accessed and created markers on the EEG data. This will allow us to create markers based off of PsychoPy progress and will help sync the data between the two. I was excited enough that I did a heel click and then Aron followed in suit and did one.



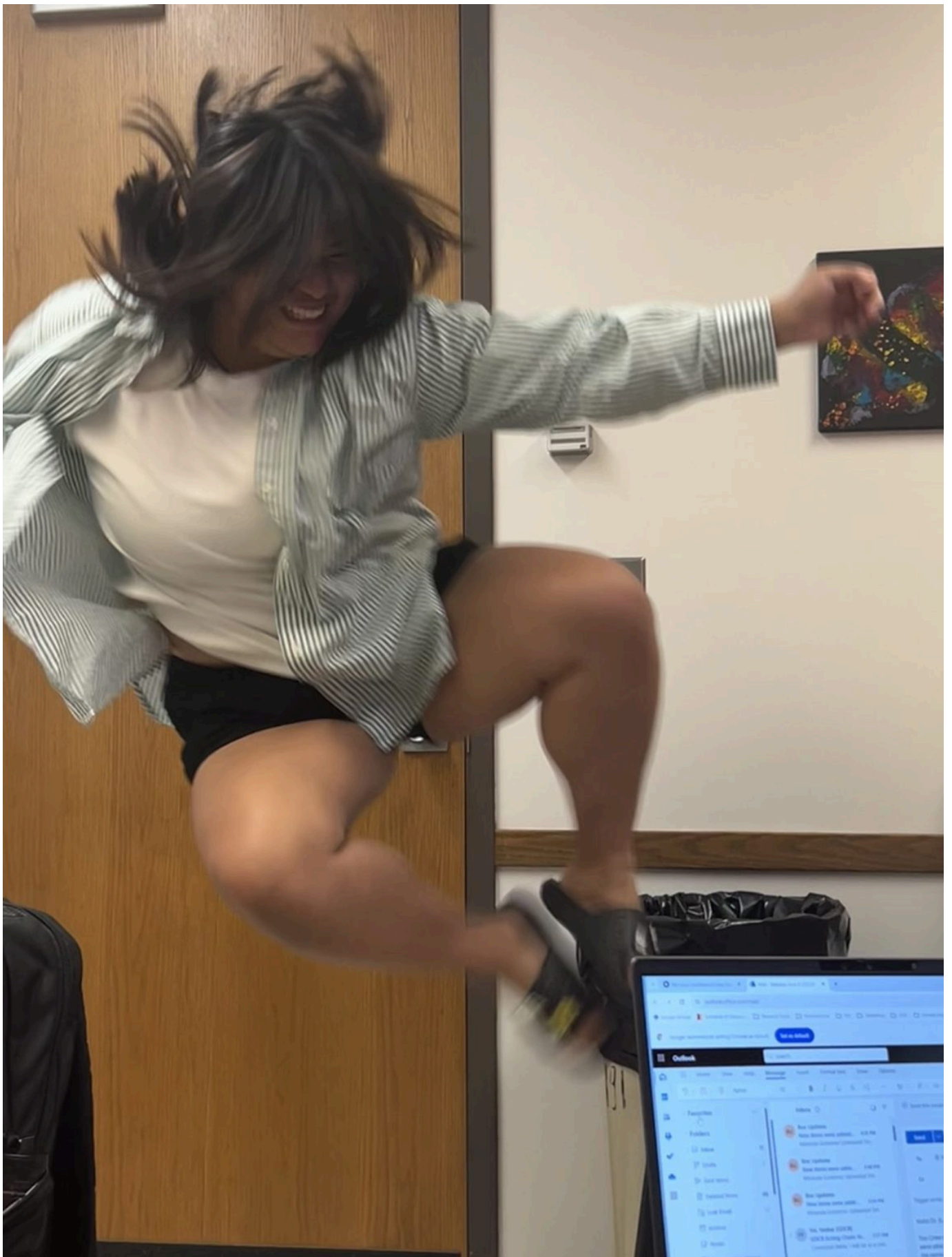
The bottom section with dots is the trigger working!!!





Aron's brain waves from the excitement of a working trigger





Heel Click because the trigger is working

▶ 0:00 / 0:00



Aron's Heel Click

Best,

Sophie

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## Papers are fun?

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 [July 11, 2024](#)  [Sophie Meronek](#)

Hello all

These past few days we have been working on writing our paper. More specifically, our literature review. This process has been a great learning experience. When it comes to writing collaboratively it can be a challenge. Most times people have differing styles of writing and have different ways of voicing information, which can make it hard to create a cohesive paper. One statement could sound good to one person, and sound bad to another. These past days have really highlighted how this could happen. Though even with the conflict we were able to get a good draft of our literature review.

Yesterday we went to the lab and were trying to test the trigger again. I swear this trigger is going to be the death of me. It hasn't worked yet, but I think I found something else about the trigger that will make it work. The problem is to test the trigger, we need the whole EEG set up which requires us to be in Forker. This then eats up time with our actual trials and has caused a fair bit of delay.

I am looking forward to the weekend since one of my good friends will be in Des Moines.

Well that's all,

Best,

Sophie

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## 4th of July Weekend

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 [July 8, 2024](#)  [Sophie Meronek](#)

Hello Friends

So, I have been busy this past week. Let's break it down:

### Wednesday

We had our MCA presentation on Wednesday, and it was kind of stressful. I am used to speaking in front of people, but I over think things and become anxious. Our presentation was about machine learning and self-driving cars. For the past two weeks we were learning about machine learning and the process around it. I enjoyed watching all of the presentations and thought they all were pretty interesting. This coming semester I have a machine learning and am very thankful for some background information into the subject.

## Thursday

There were 8 of us that went to go see Inside Out 2, which was pretty enjoyable. The first movie came out like 9 years ago (I feel old) and I was in either in 5th or 6th grade which is crazy. I thought the movie was good and anxiety seemed the most realistic to me. I thought some of the dialogue was funny since it didn't seem the most realistic, but it was still funny. Following the movie we went to go get ramen. This was the first time I was having actual ramen, and it was really good. I had gotten steak ramen and would get it again. After that we kind of hung out and enjoyed the Fourth of July and the break we had.

## Weekend

For the weekend I went home to see my family. I was extremely excited for this since we had just gotten a new orange kitten named George. It was really nice seeing my family and just having some time away after a somewhat stressful week. I got to play with my dogs and have homemade food which was so nice. I also got to see my grandparents which was really sweet.

When I got back, we went to our grad mentor's house. The dinner there was marvelous, and I need to recipe (I am looking at you Aron). It was a really nice house and was fun to meet his family. We played some basketball and volleyball after dinner. Then I showed how good I was at Mario Kart (I got last for most of the races). I really enjoyed the time we spent.

Well, that's all folks,

Best,

Sophie

CoR Questions:

CommHeat: What kind of personas have you created so far? StemXR: How are you going to measure engagement?

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## “WHOA, WE’RE HALF WAY THERE”

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 [July 1, 2024](#)  [Sophie Meronek](#)

Hello friends

We have just entered the month of July and it is past the halfway point. I feel like the program has been moving fast, and at the same time, very slow. I feel like I am starting to feel a little bit of burn out since there is much to do every day. Don't get me wrong, I am enjoying what I am doing, but I feel like there is a lot of material I need to or want to know with not enough time to fully understand it.

Let's get to the more fun topics. Since it has been a while, I'll give you a run down on what has happened.

## Thursday:

We went over HCI and looked at the different kind of studies. We started with ways we can mess with a study to get more favorable results. There are tons of ways you can mess with a study throughout the process. In addition, there are different ways you can conduct a study. Like how it can be experimental,



quasi experiments, observational, and correlational. This wasn't entirely new, but it was kind of surprising.

Following that we had a Luncheon Lecture with Dr. Stephen Gillbert. We got to learn about some of his research and how he ended up here. I was very interested in his research on creating voting machines. There is a lot of problems that can come with voting machines such as accessibility, malfunctions in voting numbers, etc.

We then went to Forker to do a pilot run with the EEG. We had a little bit of a malfunction because I made a mistake in the code. We were able to fix it, but used the hard code I wrote. We are hoping to do a full test run eventually. It is now down to getting the Biosemi trigger connected to the PsychoPy builder. Once that has been done, I feel confident things will work out well.

At 4 a group of us went down to Des Moines. Harrison and Rodney got their haircut, and Lydia and I went to my apartment to do a little bit of studying while we waited. Once the two of them got done with their haircuts we went to Ingersoll to get some food. We didn't back to Ames until later, but it was a really fun.

## Friday:

We mostly worked on our MCA in Machine Learning. We are getting ready to put our models into a Unity world and have them drive a car. My hope is that my car can be a tank and more specifically a TANK! I would play World of Tanks Blitz with my dad when I was younger and always enjoyed it (even though I got blown up the most). The most annoying tank was a Matilda, so for memories sake that is the tank I am hoping to use.

Also, I have really picked up cooking. Today I made pan fried cod. I had to baste the fish in butter and that was an experience, but it was kind of fun. So far, I have cooked chicken, beef, and fish on the stove for dinners. I am excited to try out more recipes later on.

## Weekend:

We didn't do anything massive over the weekend. On Saturday I went to the grocery store with Alee and Andrea, which was fun. Then later that night we all went to a park and roasted marshmallows. I was extremely paranoid because I have been watching Supernatural with Alee and all bad things happen in the dark in a secluded place. Obviously, nothing bad happened. Then Sunday I did some cleaning and worked on the MCA presentation at VRAC. Other than that, there wasn't much going on.

OH WAIT! This weekend was the Gymnastics Olympic Trials. I am extremely excited that Suni Lee will be going back to the Olympics since she had some set back this year. I remember watching her 3 years ago when she went to Tokyo and won the All-Around Gold Medal. It was amazing.

Okay now that is all.

Best,

Sophie

PS. Hope you enjoyed that Bon Jovi reference

# HCI: Study Project

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 June 30, 2024  Sophie Meronek

For this assignment we are to design a study about smart phones and driving safety. I will be creating a study that will be quasi experiment.

The study will be looking at phone usage and driving safety. The question is whether phone usage impacts the drivers' chances of picking up their phones. I hypothesize that those with a higher phone usage will pick up their phones more while driving, compared to those who have lower phone usage.

The experiment will have the participants fill out a survey about their phone usage throughout the day. In addition, we will take the average number of hours used on the phone during the past week to also determine whether they are heavy or light phone users. From there, we will have them drive a course similar to behind the wheel test. Throughout the course, the participant must have their phone in the center console with notifications on. While they are driving, there will be a series of notifications that will go off. We will be measuring how well they do on the test as the dependent variables.

Once all of the data has been collected, I will clean up the data and analyze the data. Some of the ways I will analyze the data is by running a single factor ANOVA test to see if there is a significant difference between the two groups. Following that I will look at the  $R^2$ ,  $s$ , and  $p$ -value to see the fit of the model.

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## My Computer is Gonna Hate Me

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 June 27, 2024  Sophie Meronek

Hello friends

So, it has been a few days since I last posted. I am currently trying to post on Monday, Wednesday, and Friday (obviously I failed this week) to give me more ideas to write about. So, let's break down the past few days.

### Tuesday

Today we had Craft of Research on plagiarism. I didn't realize how many different ways you could plagiarize. Most time I think it is taking exact phrases from text, but you must also give the authors reference for ideas. I mean I have done this while I write, but I never actively thought about it.

After that we had another Luncheon Lecture with Holly Oberbroeckling who was a previous REU intern. She gave a lot of insight and advice when it come to the program. One was about how the program was only 10 weeks, and research takes a long time. She explained how it is important to remember this and that it is alright if we need to scale back out final product. This something I have a hard time with because I want to meet and sometimes exceed the level we are given, but I have gotten better at admitting failures.

We also met with Aron and talked about what we need to do for the research project. We wanted to get a better grasp on where we should be at for the project milestones. In adding we were looking at how to process the data we get from the EEG using MATLAB. We already have some prebuilt functions, so it won't be too bad.

## Wednesday

Today we were on the machine learning grind. At the beginning of the day, we were working on creating our data pipeline and getting the data onto our computers. We are using a CNN model for our self-driving car. Once we had the model functions, we could start trying to train the model. Let's just say computer is going to hate me as it is maxing out on RAM and is going pretty slow. Hopefully I'll get to train me model.

That's all folks,

Sophie

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## Movies, Breakfast, Machine Learning, OH MY!

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 [June 24, 2024](#)  [Sophie Meronek](#)

Hello friends

I swear I am alive, just went MIA from blogs. At least y'all aren't asking for a proof of life (my mom has done that twice).

Last Thursday for our extracurricular we watch Spirited Away. This is an anime movie about a young girl that gets swept into the spirit world and must work to save her parents. I won't go too far into the plot, so I don't spoil it. I have seen this movie before, so there weren't any big surprises.

The next day we were starting our deep dives. My deep dive is about machine learning. The plan is to create a model that will be able to drive a self-driving car. I haven't done anything with machine learning before so this will be a learning curve.

Then over the weekend we had breakfast on Saturday and just hung out for the rest of the weekend.

Well that a wrap.

Best,

Sophie

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## Dr. S and EEG

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 [June 20, 2024](#)  [Sophie Meronek](#)

Hello peeps

Today was a jam packed day. We had Dr.S give a luncheon lecture on her research and how she got to where she is now. Her research focuses on music and Parkinson's disease. She works with people who have Parkinson's and uses singing to try and lessen some of the effects. I was extremely interested on how she was using the research to help people and how connected she was with her subjects.

Following that, it was Harrison's turn to be mind controlled. JK! But, he got the EEG on his head. We finally had a successful run with data collection and using the PsychoPy Builder (I finally broke down and was messing with it instead of using the coder).

Well that's all folks,

Best,

Sophie

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## Unity, EEG, and Zumba

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 June 18, 2024  [Sophie Meronek](#)

Hello all

Yesterday we started to work in Unity. We were just moving the 3D models we made in Blender to Unity. Soon we will create animations.

Today for our lecture we had Dr Eliot Winer, who is the director of VRAC and for the REU. He talked about his journey to where he is now and some of the research he has done. It was kind of nice to point out that our future isn't a straight path. We might end up in industries we couldn't fathom now.

In addition, we had another day with the EEG today. We have been working with the EEG to prepare for the real trials with our PsychoPy trivia questions. I have been enjoying working with the case and learning more about EEGs.

We also had an extracurricular today. I had fun doing Zumba, but I couldn't do some of the things because I tweaked my ankle again. So I am taking it easy-ish.

Well that's all.

Best,

Sophie

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## Weekend in Des Moines

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 June 18, 2024  [Sophie Meronek](#)

Hello friends

This past weekend I was in Des Moines for a friends wedding. But before I was in Des Moines we were at the farmers market in Ames. The farmers market was really nice. I found a mug for my new apartment and I enjoyed getting to walk around with some of the others.

Well that's all,

Sophie



# HCI: Questionable Interfaces

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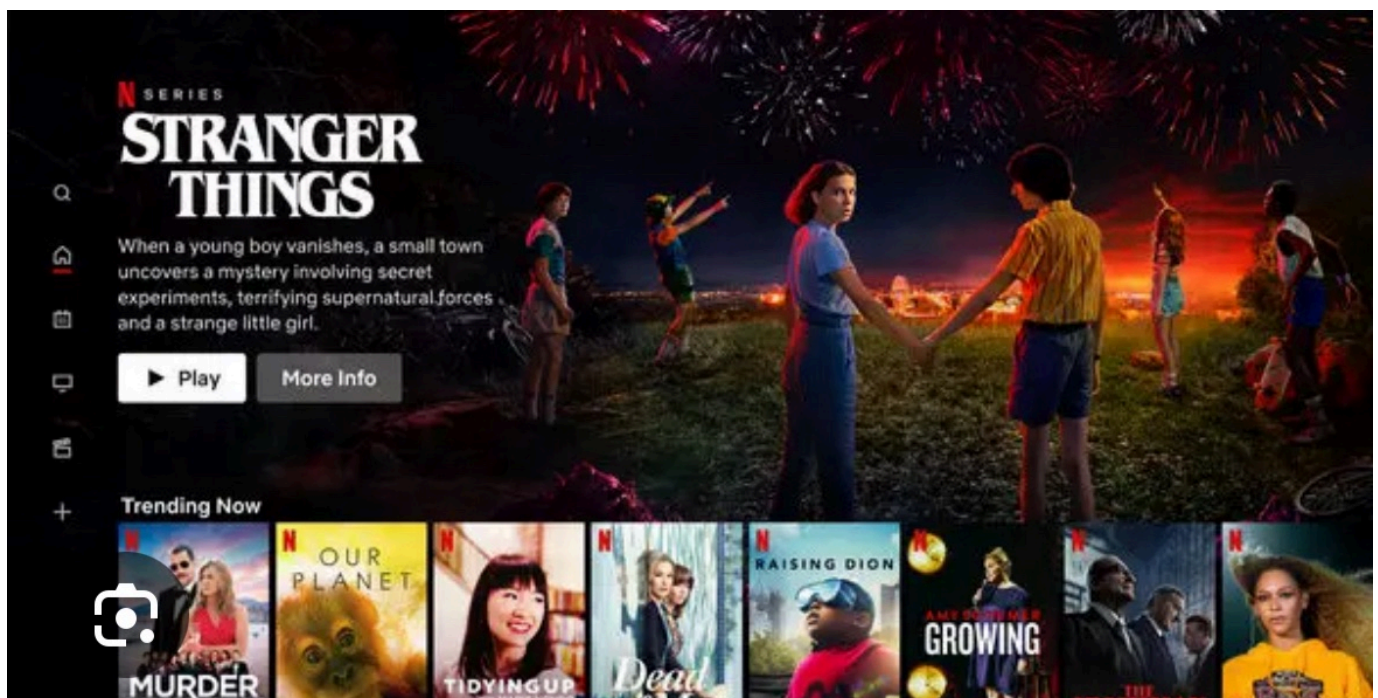
 [June 17, 2024](#)  [Sophie Meronek](#)



I am a big fan of wireless earbuds because they allow me to listen to music without having to have my phone on me at all times. With that being said, I do have some grievances with their design. I currently use JLAB Go Air Pop to listen to music. They do a great job for budget earbuds with music quality and

connectivity, however, some of the touch functionalities are not the best. In order to change different settings such as volume, listening quality, and songs, you need to use the side of the earbuds. Each setting has a different tap pattern. My problem is if I accidentally bump the side of an earbud, it might pause the song or skip the song entirely. This has led to some frustration with using my earbuds. If I were to make some design changes, I would maybe have a button to press on the side of the earbuds. That way you couldn't accidentally touch the earbuds and change the setting, while allowing for a more minimalistic look to them.

Another interface I have gripes with is Netflix. When I am scrolling to find a show on Netflix, if I stay too long on an icon, there is a preview that is played. While this can be good at certain times, it often plays over the synopsis that I was trying to read. This has led to miscommunications with my family since we can't hear over the loud preview. Going forward, I would maybe increase the time before the preview starts, or maybe allow the user to click on the preview



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## Games and Manholes

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 June 14, 2024  [Sophie Meronek](#)

Hello friends

So these past 24 hours have been very interesting.

First off we had a game night yesterday. We played Scattergories and Telestrations. There was one round of Telestrations where I got the word flipper and by the end of it we had the words foot brain surgery, which is something.



# SCORE SHEET

ROUND	POINTS
1	
2	
3	
TOTAL	

(SEE PG. 2 OF RULES FOR DETAILS)

## NUMBER OF PLAYERS

EVEN:  
WRITE WORD,  
THEN DRAW!

ODD:  
WRITE WORD,  
THEN PASS!

SECRET WORD:

Flippers

NAME: Sophie ☺

Telestrations.



1

2

3

4

5

6

7

8

9

10

11



**GUESS IT!**

**REMINDER:**

- FLIP BACK TO PREVIOUS PAGE
- LOOK AT SKETCH
- WRITE YOUR GUESS BELOW
- FLIP FORWARD TO PAGE 9
- DON'T CLOSE BOOK
- PASS TO NEXT PLAYER

**NO PEEKING AT  
YOUR NEIGHBOR'S  
BOOK!**



**GUESS IT!**

**Foot brain  
surgery**

*Write your guess above!*

**8**

Telestrations.

**8 9 10 11 12**

Following that, on a way back to the apartment, we saw Chu Chu on the side of the road looking at a storm drain. We thought he had some bike complications, so we got off the bus and went over to help.



Turns out he dropped his phone into the storm drain. This lead to us calling public safety to try and get the phone out.







After some time, we were able to get the phone back that is to a public safety officers.

Well that is the end of story.

Best,

Sophie

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## 3D Modeling is Fun

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 June 13, 2024  [Sophie Meronek](#)

Howdy Y'all

This week we have been doing a lot of 3D modeling. We started with Solidworks and Blender. I have really enjoyed Solidworks. We created 9 different parts and then assembled them, which is kind of tedious and kind of fun.

Blender is interesting and is a little more complicated for me, but I am figuring it out. For example, we were supposed to make a cat for an activity, and instead I made a bat. Hopefully the cozy library I am planning on making will turn out better.

Best,

Sophie

 [Blog Posts](#)

## EEGs and Cybersickness

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 June 11, 2024  [Sophie Meronek](#)

Good Evening Friends,

We had our 3rd Luncheon Lecture and it was all about cyber sickness. The speaker today was Dr. Jon Kelly, who talked out the possibility for sickness when using VR. I really enjoyed the speech because I am someone who gets motion sickness very easily and have been reluctant to use VR since I believe j will get sick.

Following that it was our first day at the lab. We went through the procedures of using an EEG and how it works. Then I got a cap on my head and gel in my hair. The next thing I knew I was hooked up to a machine and my brain was being controlled, JK, they were just monitoring my brain.

I don't have any photos as of now, but I'll try and get some.

Best,

Sophie

 [Blog Posts](#)



# Lobsters, Wings, and Ropes

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 June 10, 2024  Sophie Meronek

Hello people,

So, I realized I never posted my blog for Friday, so this one will be a longer post to cover the past 4 days.

## Thursday

I said I would tell you more about the art walk and that is what this blog post is all about. So, the Art Walk was on Main Street and there were other shops with the art booths. At one of the shops, I was infatuated with a plush lobster that could also be used as a heating pad. I don't know why, but the lobster made me so happy, and I ended up buying him.



## Meet Señor Lobster.

We also explored a few other stores. There was a chocolate store that had some good lemon and lime gelato. There was also a bookstore.

Following the Art Walk we all went to Buffalo Wild Wings.



## The Weekend

Over the weekend we had our second mandatory extracurricular activity which was a team bonding activity and rope course.







The team bonding was surely something. We had to get through different obstacles together. One of the challenges we had was to get over a slanted wooden post that was a few feet in the air. Let's just say it didn't exactly go as expected and while I was going over the post, I kind of fell. I ended up scraping my left arm and falling on my back (nothing was broken).

Following the Rope Course we got Whatcha Smokin!

Whatcha Smokin is a barbeque spot Luther, Iowa. This was my third time getting their food and I really enjoyed it.

Then on Sunday I went to the Ames Public Library, which is pretty sweet. They have a wide variety of books along with some study spaces. While there I was working on some PsychoPy coding. PsychoPy is the application we are currently using to induce curiosity. I am trying to figure out PsychoPy's documentation and coding in it.

Other than that nothing has really changed.

Best,

Sophie Meronek

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## More Papers and More Lectures

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 [June 6, 2024](#)  [Sophie Meronek](#)

Hello,

After yesterday's post, we talked about a more optimal way to read different articles and papers. My biggest problem is I overly focus on minuscule details. This leads me to believing every small detail is important and I must write it down. This is ineffective because it would lead me missing the larger details and not seeing the full picture. Though thanks to Yvonne, I can read papers more efficiently.

Today, we also had our second luncheon lecture. This was Dr. Wes Lefferts who focuses on physiology and does research in the Clinical Vascular Research Lab. Some of the topics he spoke about were completely outside of my knowledge but was still interesting. During the presentation, I thought about how much my sister would love this topic. My sister is an amazing dancer with a BFA in Dance and she also has a certificate for personal training. Dr. Lefferts' research was mostly about how the cardiovascular system can impact cognitive diseases, but he also discussed some of ways the body can benefit and works during physical activities.

Other than that, today has been slow, however tonight we are going to an Art Walk in downtown Ames. I am extremely excited for this.

Till next time,

Sophie

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# Papers and Rainbows?

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 June 5, 2024  Sophie Meronek

Hello friends,

Is it possible to drown in papers...

Well not literally drowning, but it does feel like it right now.

I am someone who loves to read books, but academic papers are a different concept all together. The research papers aren't boring, but they are full of advance terminology and concepts that delve deep into the concept. Recently I was reading a paper about curiosity, and it explored the different definitions and theories that involved curiosity.

In addition, I have been utilizing the recreational center here at Ames. Today post-workout, there was some rain while I was riding back to the apartments. Once the rain stopped, there was a magnificent rainbow and right above it was a second one.

Here are some photos I took:













I hope you enjoy these photos.

Best,

Sophie

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## C++ and Luncheon Lectures

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 [June 5, 2024](#)  [Sophie Meronek](#)

Hello again,

There have not been too many exciting events in the past 24 hours. We learned more C++ yesterday and focused primarily on condition and loops. The code for loops and conditionals is not too difficult for there are many similarities with Java.

I am doing a side task with trying to code the number guessing game Bulls and Cows using C++. The goal of the game is to guess a 4-digit number and you only get clues on the number of digits that are in the

correct place and if there are digits that are in the number, but not in the correct place. This is a fun task I try and do so I can apply different functions.

Today, we had our first Luncheon Lecture. It was with Dr. James Oliver who was a previous director for VRAC. He brought a lot of insight and advice for the future. Here are just a few bullets.

- Life can lead you down a lot of roads that are not always a straight shot
- Research using VR is not just computer based. He brought up how one research project to look at the behavior of chickens that were placed in a virtual reality free range. Or how they used VR to create a control environment to see how people consumed food.

That's pretty much all for today.

Best,

Sophie



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## Greeting from Ames!!!

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June 3, 2024



Sophie Meronek

Hello all,

This is my first blog post here at ISU. These past 2 weeks have been very hectic for me. Earlier, I was scrambling to find a summer job and was completely lost on what my plans were. Then, I get a call from an Ames number, some things fell into place, and now I am here.

This past weekend was extremely fun. We went to Des Moines for brunch and an escape room. The escape room took place in this game room set and we had to find three keys to escape. I won't go into further detail, so I don't spoil the surprise, but long story short, we escaped. I also attempted to make Stroganoff for the first time, and I would say it went all right (not as good as my mom's though).

And now this brings us to today. Earlier we started our weeklong course in C++. In all honestly, the language doesn't seem too bad since there are some similarities with Java. I am looking forward to learning more about C++ and getting to the more complex concepts, but we got to start with the basics.

Best,

Sophie



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