



**AUTHOR: ELIW02**

August 3, 2022 by eliw02

## Day One Feels Like it Was Just Yesterday

As we reach the last week, it's time to write the last blog 😞

Last week was a week of celebrations and hanging out with friends. We did a lot of fun things to counter the hard work we had finishing up the projects.

Starting with Thursday last week, it was Shae's birthday! So many awesome July birthdays in this group. We decided to go to the park to play some games and hang out while the weather wasn't too bad out. After collecting everyone and getting food, we arrived at Inis Grove park. We played with a frisbee, a soccer ball, and also satisfied our inner child by playing on the playground there as well. Turns out, as we were there, another kid in Ames was celebrating his birthday as well! It was a fun night.

Friday, was another day of activities for us. After seeing a jackpot over \$1 billion I suggested a little office pool to see if maybe we'd be millionaires. We picked up some tickets and just had to wait for the drawing that night at 10. Until then, we had a full day of work to get done, including finishing our poster to be reviewed by Dr. Michael and Yvonne. Friday night, the other REUs we met had set up a fun end of summer party. We got to all see each other one more time as a few of the REUs left that weekend. I almost feel like we're the last ones and its empty. 😞 Time for the drawing came, we watched as the little

numbered balls roll into the screen and we frantically check our numbers. Unfortunately, we didn't become millionaires, but it was a good time and congratulations to the single winner. After the drawing, we continued to the party and had one last blast with everyone.

Saturday was yet another busy busy day. It was also my birthday! Starting at the bright and early 10 AM we were to depart for Adventureland. Except I ended up having to run home quickly to get a few things. Once I returned and we were all in the car, we hadn't even left the parking lot yet when we all agreed that going upside down wasn't an option. The car ride felt quite short as it usually does every time I go, even though its about 45 minutes away. We found a Toyota Prius along the way with the license plate resembling "gas guzzler" which I found hilarious, and on top of that it had more bumper stickers that were also fun reads.

Upon arriving to the park, a long wait for parking, and finally getting up to the gate, we'd made it in. It had been nearly 7 years since I'd been there last and it felt both so familiar and so different all at once. We toured the park, rode a couple roller coasters, and wandered all the way to the water park. Where we spent quite a few hours in the wave pool, the lazy river, and various waterslides. There was a super fun slide that 2 people rode down in this big tube. "Screams of Joy" was exactly what happened.

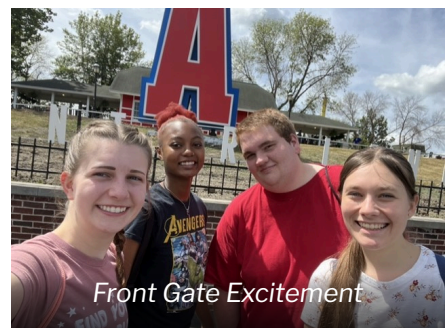
After the waterpark, we finished to tour of the park with another roller coaster and then we noticed the time. It was nearly 7:30 and we were all quite hungry. We asked the others back home if they wanted to go out for supper, to which they agreed and then we'd left the park. Leaving the park, I was already feeling a lot of emotions. I had arguably one of the best times of my life, where the last time I was there on my birthday, I had the worst time ever. This group of people is special, it's hard to really describe.



Plants and Shade



The super scary rollercoaster



Front Gate Excitement





We returned to the apartments, gathered all our friends and went to Macubana for supper. I had never been there, but it was pretty good. I feel like I might go again but it's way too expensive to go very often for me. I had a good supper, even if the sunburn on my back was slowly roasting me the whole time. Afterwards, we were heading back to the apartment where I could finally shower and then the possibility of games was on the table.

By some kind of secret plan, pure coincidence, or even divine intervention, my car was waiting for Shae to get something from CVS. I didn't think much of it, people need things. I got back to Freddy Court and up to my apartment to which I noticed an open door but no lights. "Huh that's odd" was the thought I had in my head until the person behind me flicks on the lights and people shout "Happy Birthday!" I was speechless, nearly motionless, and then they sang happy birthday to me. That's when my emotions won. I had plenty of tears that night but I wouldn't want anyone else to make me cry. If anyone of the group is reading this, just know you are the best people I've ever met and thank you so much for making my birthday special. We continued the night eating cake and chatting, I was getting more tired by the second and it was time to rest.



*Favorite Research Partners <3*



*I didn't actually get a picture, but this is from the video Thomas stole my phone to take.*

Sunday morning, I was going to go to church as we had a farewell and welcome luncheon for some members who were leaving to Africa and the family that came to fulfill the positions. I got to help my dad grill up the burgers and hot dogs, and then eat a good lunch with some other good people. I shared about my experience here at this REU internship at least 15 times. Then the rest of the day went by like it was nothing, because I just SLEPT. And boy oh boy did I need it. That night my dad took me out for supper at Buffalo Wild Wings so one less meal I had to make myself, even if the fridge has plenty of stuff to make meals.



Sunday night, Emma and Thomas got to play the ending of It Takes Two, a game we'd been annotating for our project. It was fun to see them explore the game world and finally get a little closure on the story of Rose and her parents Mae and Cody. I loved that game when I played it with my friend Sam, we had a lot of fun and it was a good memory.



Monday morning was it, we needed to finish the poster. Our mentors had responded with feedback and we got to work on it, trying to make our poster the best it could be. It was a bit difficult, but through plenty of discussion, we had done our best work. Except it took all day Monday and into Tuesday morning to do so. We turned it in right on time and I'm proud of our work.

That about wraps it up. It's been a long week of working hard and playing hard as well. To end these 10 weeks, it won't be easy. Everyone here is amazing, the people in the office are all a blessing and would help us with our many questions. The experience I got was amazing, learning new things like programming languages, an idea of grad school, and hearing from everyone else has been awesome. I'll never forget this whole Summer. 😊

July 26, 2022 by eliw02

## Crunch, Crunch, CRUNCH

It's about that time, isn't it?

As we begin to wrap up our time here, more deadlines seem to appear. Lots of planning ahead what we wanted done has helped ease the nerves a little, but the hill still needs to

be climbed.

Speaking of climbing hills. Sunday evening Meriem, Farhan, Emma, and I went out to Ledges State Park to “walk the creek” at least, that’s what I said we’d be doing. Upon arrival, Meriem wasted no time running up the nearest trail and urging us to follow her. What she said was “a short trail, I can see the end” turned out to be the longest and hardest trail in the park. Climbing up about 250 feet we reached “The Crow’s Nest” and then descended the other side of the hill. All the while I was in my shoes for walking through water, not climbing rocks.

Once we made it down, we finally got to the creek and began the journey I had in mind. The peaceful flowing waters with the trees and cliffs around us, I felt relaxed and happy. We walked the creek out to the Des Moines River where we threw some rocks, climbed a dead tree, and tried not to fall in mud.

Then after our fun in the sun, we moved back up the creek, found a random chair, looked at some big rocks, played with some little rocks, and fulfilled my childhood self by getting splashed by cars driving along the road.

Below is a huge photo dump from The Ledges and the High Trestle Bridge, Enjoy!.







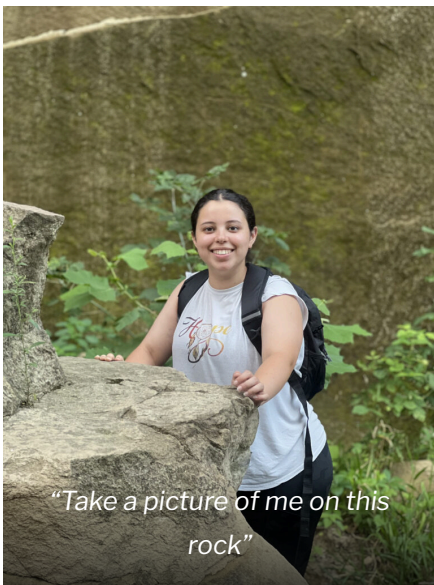
ROCKS!!!



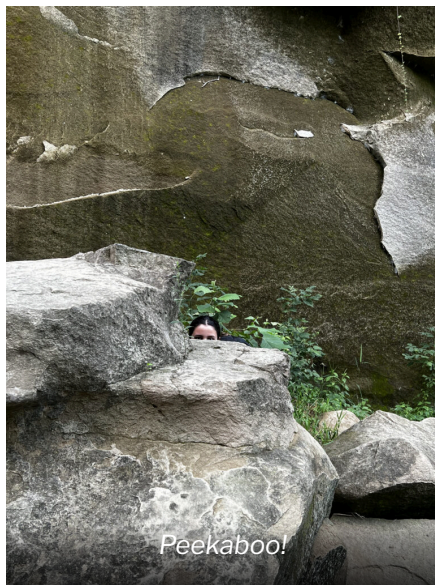
Clay-man



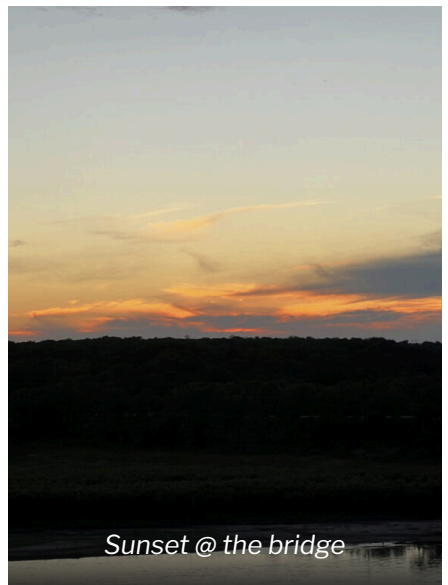
Meriem's photography skills



"Take a picture of me on this  
rock"



Peekaboo!



Sunset @ the bridge



*Natural Beauty*

We also stopped at Dominos on the way back for late-night pizza.





*Dominos Pizza in the Dominos parking lot*

Our research project really felt like it was taking form recently. We finally finished our series of annotations and data collection for our teams. 6 hours of data finally put together on a spreadsheet with heat maps, graphs, and other visualizations felt like the first big leap was complete. Getting to play with the data has been really fun, and I'm really excited to see what more we can present through it.

With the crunch time of trying to finish our work in a reasonable manner, we need to spend some extra time at the office. Last night, we'd been in the conference room for 3 hours straight and while everyone else was gone, we were working away at getting our data moved into Excel. Jack even saw us and offered to bring us stuff later, how nice of him.

Following the long day of work, I was tired. I needed an activity with minimal brain power and a little more physical activity. Unfortunately the gym was closed... I returned to the apartment, to put my stuff down and noticed I still needed to move my car. Meriem needed let in so I asked her if she wanted to ride around the block because just moving the car 30 feet was too boring for me. We drove around "the block" and eventually met up with

Mattan to see him and his cat. I'm usually not super fond of them, but this one seemed to like me and I was happy with it.

After returning to the apartment. I decided it was time to sleep. I had been yawning all day and the workload was not going to stop. I awoke this morning still a bit sluggish, but refreshed and ready to go.

Today is the day to finish up as much of the data input and analysis as possible and revise the writings for our paper and poster to get them ready to be submitted early next week.

Until then, I'll be busy but I'll try to keep updates coming.

Adios Y'all,

– Eli

July 18, 2022 by eliw02

# beep. beep. beep.

The sound that haunts my dreams.

Heads up, it'll be a long one. I'm trying to summarize the boring stuff though.

The week was full of meetings to get our research project planned out and started on the path to success. We devised a full schedule to annotate in teams, merge and analyze data, formulate that data into representable figures, and then use it for our prototype. We also had a presentation to prepare by Friday morning. Each group was tasked to share their research to an audience in a 10 minute block with 5 minutes for questions. Every team went over 10 minutes, each to a different degree. The questions were also very intriguing and took longer than anticipated as well. I enjoyed it, but it was unfortunate that our faculty mentor had to leave before ours really kicked off.

It's Friday night. After a LONG week in the office. it was time to relax and enjoy a break. Sitting in the living room of our glamorous high-rise apartment, we hear a noise. The loudest, ear rattling fire alarm goes off. As if there wasn't enough excitement in our lives already, this wanted to join on the fun. As a bunch of kiddos who've been to school for quite some time, we calmly filed out of the building and away, regrouping and discussing the event. We met some people I didn't even know were in our building, and also some



familiar faces. Eventually the Fire Department arrives, walks in with full gear, and then after an uneventful bit of time, return outside and we go back in. False alarm, something I've seen plenty of times, my highschool got so good at it it was the same time every day for nearly a week. We had a long day planned ahead of us, so we returned to get rested.

BEEP! BEEP! BEEP!

Surely enough, that awful alarm goes off once more. only this time, in the middle of some spectacular sleep. Once again we shuffle outside, dressed in our pajamas and wait for the fire department to go in once more. Checking the time, it was 5:00 AM Saturday morning. Alli is a very early bird and was already waking up at the time, the rest of us weren't planning to open our eyes until at least 8:30.

After collecting the last bit of rest we could, we began our fun day in Des Moines. Starting with the downtown farmer's market, we arrived and wandered around for a little bit. There was no shortage of people there, and no shortage of dogs as well. I wish we'd planned more time to see the whole market but it was still a good time.

Next up was the escape rooms we'd booked. We split into 2 teams and were going to race each other. The team that finished with the most time remaining wins. My team was Grace, Emma, Thomas, Charles, and myself. We played a room that had a fun casino and James Bond theme to it. The other team was Farhan, Alli, Lale, and Meriem. They played a room that was themed like a spooky hotel room with lots of hidden puzzles. Supposedly, their room was harder than ours, which is possible, but the teams were split based on room size.

After the escape rooms, was the mall. An actual, busy and living mall unlike North Grand Mall here in town. I had one desired stop at the Apple store and that was it. The rest of the time, I was hanging out with other people on their adventures. While I didn't spend any money that day, I might be returning soon to get some things.



The mall trip was done, and everyone was hungry. I called ahead to Olive Garden in Ankeny and got us a call-ahead time. Before I went there however, I had a quick detour to pick up David, another REU intern with the forensics department from the airport. We arrived, and were greeted by a server with more energy than I'd seen anyone else have. He was a great spirit and served us very well.

We returned to the glamorous high-rises and it sounds like everyone pretty much just slept.

Sunday was very much a rise and grind type of day. I went home to do some chores I'd had, take care of my dog who wasn't feeling well, and get a weekend's worth of work done in one shot. It was a long day, but eventually I'd gotten a lot of work done and returned to Freddy Court for some volleyball/badminton/parking lot 4-square. It was a lot of fun and I didn't even realize how much time had passed until I noticed I was quite hungry and the sun had gone down a good bit.

We retreated indoors to shower and begin making supper. I heated up some hot pockets, sat down to eat them, and then as I finished.

beep. beep. beep.

The smoke detectors in our apartment went off, I wasn't worried because we were cooking and so I assumed a simple reset and opening the windows would do. It did not. I was unaware that there were 5 different detectors that could send the signal for all of them to go off. So after the RA had helped out, we knew what to do. It was perfect



because in a mere 10 minutes, the beeping started again. I left for the apartment down the hall because I was getting quite the headache. The detectors continued to go off for nearly an hour before maintenance showed up and replaced the one that was presumed to be faulty. I returned to my bed, but I still heard it ringing in my ears.

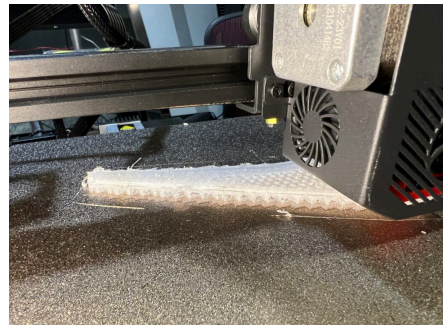
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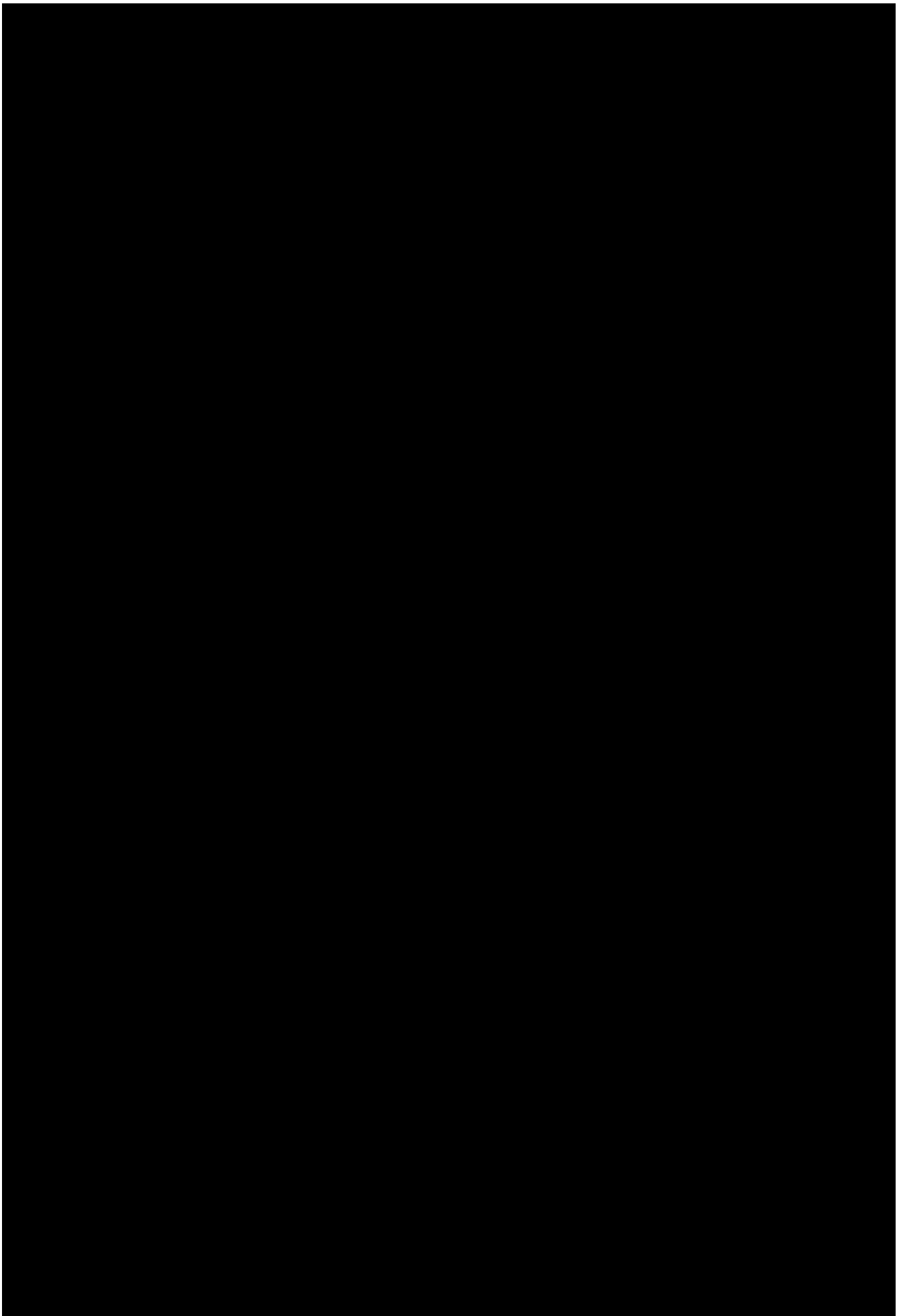
July 13, 2022 by eliw02

## Hello? Is anyone home?

Well, it's been a week. One long, fun, tiresome, exciting, and challenging week.

Lots of work got put into the MCA presentations this week. Nearly every hour of the week was spent working on completing and preparing to present what we'd done. In my group, the printers were essentially running nonstop, and if they weren't it was a sour feeling as they should have been. I was attempting to print wings in all of the materials, Alli had a seemingly endless amount of chess pieces and Grace REALLY wanted the big heart printed. Old Faithful stood up to its name, cranking parts out one after another and finishing with the marathon of what appears to be Andre the Giant's heart. To see it, look at Grace's blog, I'd bet money it'll be there.







*Obligatory time lapse of 3D printing*

On top of the MCA craze, we still had the main research project to look after. The cooperative gaming group was given writing assignments, video annotations, and article readings and exercises strewn about the week with many meetings to check on the progress. Yvonne had to deal with our panic and overload of work and I can't thank her enough for being patient with us. To continue the research work, we came in on a lovely Saturday morning and spent over 3 hours to get 6 minutes of video annotated with a common consensus on the codebook. It was the most fun I've ever had spending so much time to get seemingly little progress completed. 10/10 would do again, but maybe not so soon.

With all of this craze going on, there was one piece missing. The cherry on top, if you would. We had to design a t-shirt for our REU. The deadline? 12 hours from when we were told about it. Wednesday afternoon, Imtiajul gave us the simple, yet monumental, task to design a shirt. We discussed, and even argued, about colors, designs, what should and should not be on the shirt, who was making it, and even begging for a little more time to settle nerves. Luckily, we ended with a design I think everyone could enjoy. Thanks to Thomas for making the shirt design.

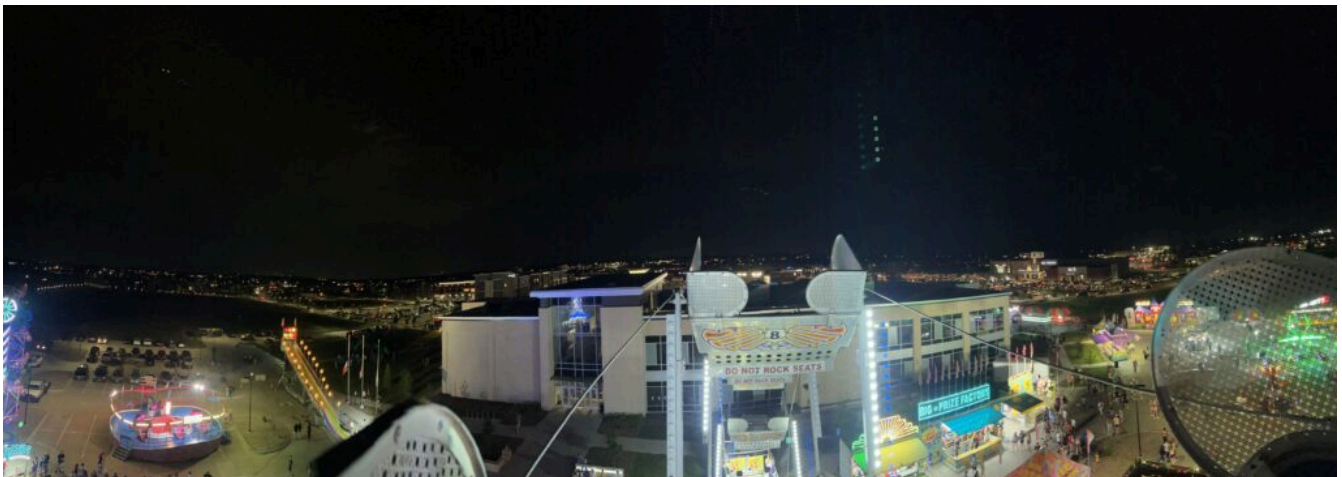
Needless to say, that was a wildly intense week, and we needed to blow off some steam. Friday night, was roller skating at the roller rink in Ogden. It had been a solid minute since I'd last been roller skating so I had a hard time trying to get back into it. Afterwards we ordered pizza to the apartment and tried to race the delivery driver back. Unfortunately the delivery guy won, and more unfortunately, my car came in last due to an unforeseen interaction.

Saturday, the shenanigans of work continued. In our time at the office a nice little reunion trip idea got tossed around and I know I'm definitely hoping for that to happen. Following



the time at the office, I swear I did something but no one else was there, and I cannot remember what I did. Later that night we got together to watch “The Inventor” a documentary on Elizabeth Holmes for our ethics course. It was a very interesting experience as I’d seen more than enough of her eyes and weird face morphing effects for many lifetimes. If you get the chance, I’d recommend but beware.

Sunday morning started the last-minute scurry for finishing my MCA presentation, getting laundry done for the next week, running errands for my family, and it was met with late-night fun. We planned an extracurricular to go down to Ankeny Summerfest Sunday night. It was well worth the drive, lots of interesting new food to try and a full carnival of rides and games to enjoy. We stayed for the fireworks and I tried really hard to watch them from the Ferris wheel at the carnival. Waiting in line we heard many of them and saw a few but I had faith timing would be in my favor. Grace came with me and we got so close but not quite. It wasn’t in vain though as it was still a nice and relaxing ride with a nice nighttime view of the city from the top of the wheel.



Pano of Ankeny at night 😊

After our time in Ankeny, most of the crew went home while Grace, Meriem, and I went to pick up Farhan from the airport. I missed him so much already I had to be one of the first ones to see him. I’d never seen I-35 and much less 235 and MLK parkway that empty before. I’m not much for city driving but when the city’s asleep it’s not too bad.

Monday was presentation day. I was tired and anxious all day. Luckily it seemed to go quite well. Even though I had discussed many of the MCA’s with the others I enjoyed seeing the presentations and hearing some interesting questions brought up by the others in the room. Once the presentations were done, the vibes of the office crashed to tiredness. I returned to the apartment, got some food for supper and the best way I’ve heard it

described was by Grace but I “zonked.” It was some much-needed sleep though and I regret nothing.

Today brings back the routine of the main research project with a couple lectures here and there. A very easy and calming week before the rush to the end comes sooner than we want.

Until next time, Adios Y'all  
– Eli

July 5, 2022 by eliw02

## About \$700 of Bangs, Booms, and Colorful Lights

But if My mom asks, it was less than \$500. 😊

This one is going to be a blog. I guarantee it.

So continuing from last time, I had a busy week of working through my MCA and on the Cooperative Gaming research project as well. If I wasn't in the DABL (Design And Build Lab) I was in Yvonne's office or some other planned meeting on the calendar.

I got to go a little more in-depth with my MCA. I found 2 different wings, a Cessna 172 main wing and part of a Boeing 737 wing. These both seemed like very common wings being that the 737 is the icon of commercial travel and the Cessna is an icon of private pilots. I was able to find some good models of the wings to look at and many articles on the topic of Additive Manufacturing in the field of aerospace. Alex has been super helpful the whole way, helping me understand what type of journals to look for with this type of research and for assisting in creating the parts themselves.

The main research project has been coming along alright. we got down to making a detailed timeline with tasks for the next few weeks as we finish out the program. We have plenty more annotating to do, a full literature review, and of course, writing the paper/poster so we can have stuff to present by the end. I'm sure there will be no shortage in busy weeks from here on out.

The weekend was long, in so many ways. First, literally it was longer because Monday was Independence Day and so we had that day off. Thankfully so, because it was hot and sticky outside, I had no desire to be outside longer than I had to.

Next, it was full of different activities. Starting with Thursday, though technically not the weekend, Grace, Emma, and I went to the pool with Kat and David from our building. It was definitely exhaustive, almost as exhaustive as figuring out supper plans for that night. Constant back and forth on where and when. Eventually half of us found out Culver's is a delicacy of fast food, and the other half of us, the ones that went swimming, got Chipotle. Once again, bless the worker who had rice without cilantro ready for me, no soapy burrito for me!

Friday night was a night of hanging out together. Starting off at Lale's house, we got to sit and enjoy some homemade pizza and play a couple rounds of Uno. My first hand of 5 blues and 2 yellows was a sign of how it would go. Upon returning to Freddy Court, I got out my RC car I brought from home and let people drive it around the green space by the basketball and volleyball courts. Some jumps, flips, thumps, and a mighty sand bath, we left for the smores event going on in the area. I didn't even have any smores but we got to meet the biology REU Imtiajul told us about. The group chat grows even bigger.

Continuing on, Saturday morning I took a trip to Eagleville to buy some fireworks to light off for the holiday. It was a nice time to get to chat with my dad and see a slight change in scenery as I don't get to southern Iowa often. We got plenty of loud kabooms and bright balls of fire and headed back home. I returned to Freddy Court, and that night our building had a good time hanging out, starting with a little picnic outside and eventually driven inside by the bugs to play some Jackbox games. It was a very fun night, at least it was for me because I love just chatting and hanging out almost more than activities.



*Largest Fireworks Store*



*Lots of Big Booms*



Sunday morning was a nice break from the hustle of the weekend. Then Sunday afternoon I met with Thomas and Emma to go over our paper outline and try to get all on the same page with the project. That was followed by “helping” Emma make some banana bread, which smelt so delicious. That night my mom had invited us out to my house to enjoy a grill out where we all got to come together for another meal and take many pictures in the corn. Yes, I had done it. The city residents got out to the corn and smiled the whole time. Also, the sun was definitely a paid actor.



Sunday night was the Ames fireworks show, watching from a truck bed in the parking lot of Jack Trice Stadium. We also got to enjoy that banana bread Emma made. It lasted the night, barely. Afterwards I returned to my house to watch the fireworks I had gone with my dad to purchase. That was much better as I was able to see them fully and it felt so much bigger.



**Iowa Chill**  
@IowaChill



Midwest culture is skipping the town  
firework show for the neighbor who just  
bought \$10k worth of mortars

11:17 AM · 7/2/22 · [Twitter for iPhone](#)

**41** Retweets **5** Quote Tweets **228** Likes



*This Tweet Speaks Truth*

Monday was a drag. This day felt so long and boring because it was way too hot to do anything outside. I used the time to do some little chores and get a little bit more work done on my projects. Eventually, Monday night we decided to go out for supper once again and we met up at Thai Kitchen. I'd never had Thai food before but I enjoyed it, I got the shrimp pad thai and ended up with some leftovers. Monday night consisted of another session of banana bread baking, this time I played a little more active role by mixing the dry ingredients then I stayed out of the way. I witnessed Grace and Meriem's expert bug smacking skills as the gnat population was driven down significantly. It ended with a nice, relaxing episode of a tv show we have watched together called, "The Good Place."

Now it is a fresh and steamy Tuesday as the heat index climbs up to 105 degrees and I have another pile of work to get done. Thankfully, it can all be done inside. but anyway, that's the recap of the last 5 days. We'll see if I survive this heat and heap of work.

'Till next time, Adios Y'all

– Eli

June 29, 2022 by eliw02

## “Success is Measured in Smiles”

Wow, what a long week. Wait... its only Wednesday? oh boy.

This week has felt like a lot and it's only Wednesday, there's still 2 more days and a whole weekend. I'll try to describe what's been going on.

Monday we continued the deeper dives, getting closer to the point where we needed to pick what our Major Course Activity (MCA) would look like. I was still totally lost, not sure at all what I wanted to do and Grace already has models of hearts and brains with a vision of exactly how she wanted hers to look. I knew I wanted to do something in the realm of aerospace as it is my passion, but what exactly could I do...

Monday night, I was even more lost. I had no idea what I was reading with some of the articles Yvonne sent us for our research project. Luckily, I wasn't the only one but after our meeting Tuesday morning, it made total sense.

Tuesday was... certainly a day, that's for sure. Tuesday morning we got a lecture from the boss man Eliot about Plagiarism and Ethics within the world of research. He was extremely detailed and explained forms of plagiarism I didn't even know were real. I could tell he wanted us to avoid these situations as much as possible but he also prepared us because some of them *will* happen.

Our luncheon lecture was with Kimberly Zarecor who talked about her path to research and how she got involved with the ideas of architecture and how it relates to political history/geography. I kind of knew there was something going on, but she gave it a name and showed us exactly what happens. We discussed small-town Iowa and how the population shifts are affecting the future of these spaces. I was simply intrigued because it was Iowa, but I left thinking what I might do with my future dreams/career.

Not long after that lecture, the office gained a smell. A rather distinct smell of chemical nature. I thought it was some kind of combination of spray paint and baby powder, but it was some type of concrete sealer apparently. Our afternoon was cut off by the chemical air that was being circulated through the building. Eliot was very kind and got us some



bubble tea and took us to campus to chat with him and the other grad students. I sat with him and got to learn more about what path I want to take in my future. What was a fence-sitting stance on maybe going to grad school has shifted to “Where am I gonna go to grad school?” He might’ve been trying to sell it to me more than advising, but either way, it worked. It’s a good deal that I have 2 more years of undergrad to go.

Tuesday night I did some work on the research project at the “home office” and took a spontaneous trip home to grab stuff for going to the pool because I didn’t pack anything. I texted Grace that I was totally winning because I was lucky enough to find my stuff, see my dogs, and get a lovely home-cooked meal from my dad. I don’t know what I’d do if I wasn’t living next to my house.

Now we’ve reached Wednesday, or hump day as some camels call it. Alex helped me out a ton with figuring out what my MCA would look like. I want to combine the idea of 3D printed airfoils and how to decide which material to use for a project by making multiple versions of the same part to discuss them and hopefully do some Finite Element Analysis (FEA) on them because that is something mechanical engineers do quite often.

That about sums it up. I’ll be back again for what happens next.

‘Till then, adios y’all,  
– Eli

June 27, 2022 by eliw02

## 2 For The Price Of 1

I’m back for yet another glorious week in paradise, at least a week in the office and continuing to work on the Deeper Dive class and Research Project. Before I talk more about those however, I gotta share what I did this weekend.

We’ll begin with Friday, right after I left the office. I was heading back to the apartment with Grace and on the way out of Howe Hall we ran into Emma’s family who we very briefly saw the night before at the picnic event thing (Still not sure what its official name is called). In having a quick conversation we had missed the bus. 😞 But! We were in luck because Grace’s friend from back home, Miranda, had come into town and gave us a ride back to

Freddy Court. I must say it was nice to get in someone else's car and fit well, because being 6'3" and with a bigger build I struggle to fit into many smaller vehicles.

Friday night we went out for supper with the Forensics REU group that Grace, Farhan, and Meriem met at the gym. We decided to drive over to El Azteca, a good Mexican restaurant here in town. I've been there a few times before but I typically go to La Carreta in Boone if I want Mexican food. The group of us: Grace, Miranda, Kat, Thomas, Myself, Meriem, Eden, and Farhan sat down and got to enjoy some delicious food and talk more with each other and even share some interesting stories for a supper table, anyway I had a blast and was very grateful that I didn't have to cook.

After supper we headed back to Freddy Court and I got to tour Eden and David's apartment. They have the ADA apartment in the corner on first floor. There's had a lot more space, a way better washer and dryer than us, but they also had many sinks and in many random places, like a hallway just next to the kitchen but like tucked away. It was very interesting all around. We got up to the guys apartment on 3rd floor and we sat around together to play games and hang out. That was also very fun. Friday night was a good night for sure.

Saturday morning, 9:00 AM I woke up and realized in 45 minutes I had to be a functioning member of society and go to the Ames Farmer's Market. I got ready and sluggishly went out the door. The farmers market was a nice trip, I had some donuts, realized I was still hungry, got a breakfast burrito from a taco truck, ate it while listening to some live music, and got some more donuts before I saw a wood-engraving/carving stand and found a nice little wooden piece to get my dad as a late Father's Day gift. It was a quick trip but a good one nonetheless.

Saturday Afternoon, Evening, and part of the night I was nearly in shambles trying to get my new car speakers installed. I had a friend to help me and we both sat and looked and googled so many things before we finally got to it and put 1 of 6 speakers in. At this point it had been about 3.5-4 hours and I was wayyyyy late for the plan I made earlier to go to Ogden Fun Days and see my family's food truck. By around 9:00 we had finally put in 4/6 speakers, I had received at least 10 bug bites, and I was hungry because the only thing I ate that day was the burrito at 10 AM.

I arrived back to Freddy Court, tired, dirty, and still hungry at about 9:30. I was able to grab food, get showered and enjoy the last half of the movie The Imitation Game with some

friends in the living room.

Sunday morning I got up and ready for church, took one step outside and I think I fell in love. It was seriously SO NICE outside Sunday. I cruised to church with the windows down and then took a little bit of time to fix my hair in the bathroom because the wind gave me a very odd style I wasn't capable of pulling off. I got to spend Sunday afternoon and evening with my family. My dad helped me finish installing the new speakers and I was so happy to have them done and without one of us starting to yell. I was watching the inside of my eyelids when a text rang through from Thomas saying Farhan missed me. I decided that it was time to head back and so I gathered my things and left.

Since then, not too much has happened. This morning we continued our deeper dives and finally printed a cute little mug. I was so excited when it held water!







*That Looks Better!*

Hasta la vista  
Adios y'all

– Eli

June 27, 2022 by eliw02

# I'm Not Late, I Just Ran Into a Wormhole

It's that time again, and boy has it been INTENSE in the last couple days.

We begin by ending our day Wednesday with some final touches to learning Unity and getting introduced to the deep dives. Jack has been a great instructor so far and it was fun to learn the program that makes one of my favorite things in the world, video games.

After the Unity class finished, we were introduced to the Deeper Dives that we would take part in. There were 3 options, and each of them gave a little intro speech.

The first, 3D Printing with Alex. Alex is a super chill dude and fun to learn from because he has all of this knowledge and insights within that I could spend hours listening to. He showcased the aspects of 3D printing and what cool and amazing things could be done with it. I was pretty hooked from the start, ready to learn a very crucial aspect in the field of mechanical engineering and experiment with interesting new ideas.

The second option presented was Machine Learning with Adam. Adam taught our C++ course and I could tell that he was very excited by the field of programming and coding. The trivial stuff wasn't the most intriguing for him but anytime we asked a direct question he knew exactly what to explain to us. This one was tempting but machine learning didn't appear to have a great impact on my intended future career.

The final option presented was Jack's XR course. XR being any combination of VR/AR and I was also nearly hooked from the start on this as well. VR is always something I wish I had more experience with but anytime I get an opportunity it's never quite right for me. In our demos earlier in the program, I loved the AR aspect of HoloLens and it reminded me of when I got to experience Google Glass in 6th grade. VR is cool for things like games but the disconnect from reality didn't intrigue my practical application ideas and I like seeing a real environment with an overlay.

We picked a ranked choice vote for which Deeper Dive we wanted to do. I listed 3D Printing as my first, thinking it would be the best overall pick for me, and luckily I got it! I

joined the 3D Printing group led by Alex with Grace and Alli.

After getting into our groups we got a tour of the DABL (Design And Build Lab) where we would have our lectures and get to see all of the printers that the VRAC has. It was fun to see how many machines there were and how each one was changed in a different way from its original.

Needless to say, I'm very excited for this Deeper Dive class and I hope I come out with so much useful knowledge that I can use in my career as an engineer, or hell, just for the fun of it all.

'Till next time

Adios y'all,

– Eli

June 23, 2022 by eliw02

## “Does Raw Salmon Taste Like Gummy Bears?”

We're back in the office today. The atmosphere in here has been super chill and friendly. It reminds me of this amazing TikTok show “Guessing Eich's Lunch” and I don't know why. Either way, we're back in action for another week REU-ing.

For starters, Monday night Trivia was our best yet. Renamed as “The Interns” we successfully managed to get 8 of us to go for BOTH rounds! The first round was a little rocky but we were pulling through until the final round there was a misunderstanding with the answer so we lost it on a technicality, but that just fueled us. We came into the second round fueled by vengeance and the delicious food we ordered. The second round was a success, launching us into 1st place and holding there. Then the final round was a home run, easy win giving us the coupons and more importantly bragging rights.





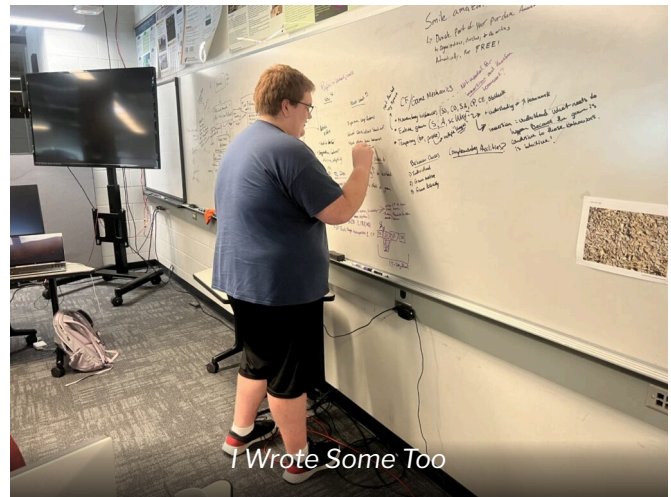
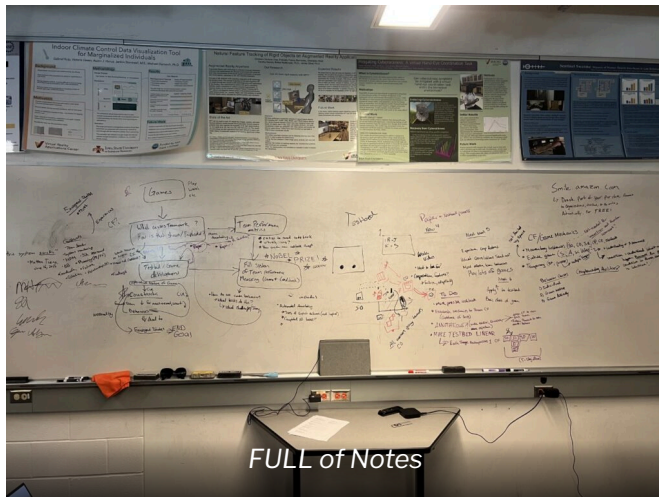
Inside the office, we began to learn Unity, an open game engine that is really fun to use and pretty powerful on it's own as well. Learning through the tutorials on the software itself and a few internet tutorials I was able to make a super simple shooter game with a variety of rooms and items. It was not the best tutorials because it was a lot of "click here" and "Change this" tasks. I wanted to be pointed in the right direction, not necessarily have my hand held the whole time. Either way, it was very fun and I'm excited to continue learning it and hopefully use it later in my career or just for fun if I have the time.

Tuesday's lectures discussed the way to show results in a paper and a visit from Mr. Cameron Mackenzie who discussed his work in many fields with a specialization in simulation. For the Craft of Research lecture on results we learned to form results in an organized way. By introducing the results to the methods described before, to presenting the results in a clear and understandable way, and then analyzing and explaining the meanings of those results.

With the luncheon lecture I learned of all the cool ways even a relatively simple situation can be used for practical and important events. To start, he took us through a hurricane situation simulation where we chose between waiting and evacuating at a proper time to not spend too much money but safely leave before a bad storm hits. It was cool to see live in front of us and a really simple-looking way to do some very important and practical procedures, especially in manufacturing situations.

The meetings didn't stop there. Our research group met with our mentors Yvonne and Dr. Michael to discuss some articles and what we wanted the scope of our project to look like. While that meeting was a good way to get into the mindset, the real progress came a little later. That afternoon, Thomas, Emma, and I took to filling up the whiteboard in our REU pod with what appears to be a hodgepodge of writing but really helped us visualize what

we wanted to do in our 10 weeks and what the future might look like with thoughts of continuing this after the program is over and hopefully getting a conference paper. (And eventually a Nobel Prize lol)



After work yesterday, Val came over and dropped off the rest of our bikes when they were all ready to use. It's been a while since I rode one but it was very nice, and a better alternative to walking in the heat.

Our extracurricular for Tuesday night was changed to a game night back at the apartments where we all gathered in our living room and played some games of Uno with Lale. It made for some good laughs and some fierce competition. I'd be alright with doing another one of those if we can get a game that's good to play with 10 of us at once.

As the week continues, we'll continue to learn in Unity including more basics and a deeper lesson on scripting and coding within the software. After the Unity course we'll get to choose our deeper dive and begin with those, which is something I'm really excited for.

Stay tuned for how that goes and for a good joke.

Adios Y'all,  
- Eli

June 21, 2022 by eliw02

## What Weekend?

Those Monday morning blues hit a bit different this morning. I was a little extra tired and not totally satisfied with my weekend but alas, here we are. The weekend was rather uneventful overall, but there was still some things that made it fun.

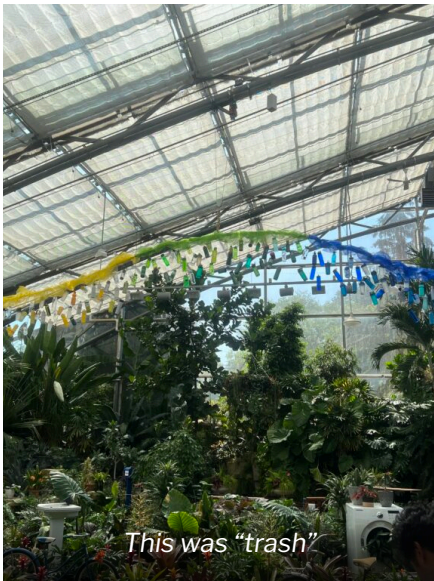
Starting with Friday night, I went out for supper with a friend of mine and afterward he showed me a gift he got me. Recently he'd had some cryptic messages about what is actually going on; giving me messages like "T-12 days" or "I got a 'thing' for you" and I finally found out. He had ordered some plush characters from Fire Emblem: Three Houses and secretly ordered one just for me. It was awesome, that's all I know to say about it, I'm still pretty speechless.

Saturday was both the most fun and most boring day I had all weekend. All morning I was bored and just sat around doing nothing truly productive until shortly after I ate lunch we decided to go bowling. So the 6 of us, Emma, Thomas, Meriem, Farhan, Charles, and myself, took a bus and walked a little bit to Memorial Union where there was some cheap bowling opportunities for us to enjoy. Once we got to the building, it was nothing short of a journey to get down to the lanes. walking everywhere we could, looking for every way down even reaching a basement that was definitely not what we were looking for. Eventually the 5 of us found our way and met Meriem who had abandoned our bigger search party and found it much quicker. We played 2 games of bowling and I ended in 4th overall, not my best game by far, but not quite my worst either.

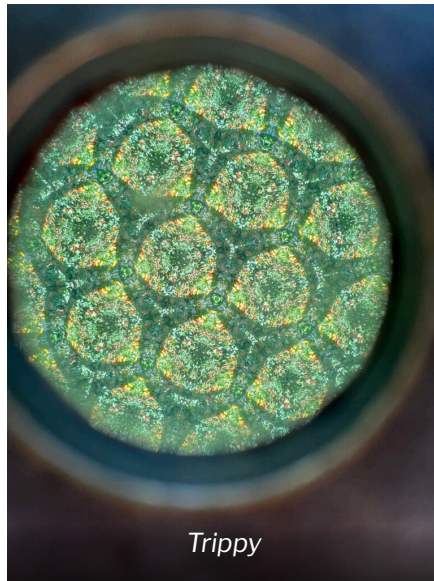
After we went bowling, the group of us went to Blaze Pizza and enjoyed ourselves some nice wood-fired pies before hitching a ride with my loving and awesome dad who picked us up and drove us back to the apartment, avoiding a rather long and hot walk back. (I showed him this blog site yesterday, so hopefully he sees this.)



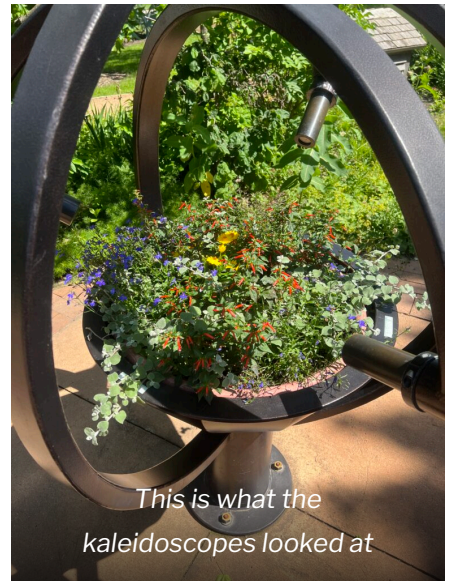
Sunday was another hot day, too hot to do much outside that wasn't shaded or in the water. I went home around Noon to do laundry, get some work done, and pick up a few things. Got to see my dogs and enjoy their company for a while before heading back to go on our trip to Reiman Gardens. Reiman Gardens was alright but it was sorta ruined by the heat of the day. It's changed a lot since I'd been there on a field trip so it was basically new.



*This was "trash"*



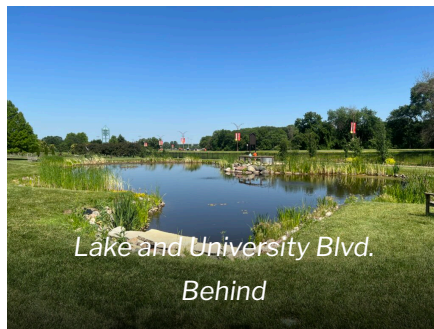
*Trippy*



*This is what the  
kaleidoscopes looked at*



*Lake and University Blvd.  
Behind*



*The Hunziker House*



*EEK! A Spider!*



*Spider had a Bird's Nest in it*



*Smilin' Scarecrow*



After touring the gardens, we took a trip to Coldstone to get ice cream and that was a big highlight of the entire weekend. It was a tasty way to cool off from being outside in the heat for the last hour and a half.

After Ice cream I met up with my parents to enjoy a Father's Day supper at Old Chicago, go home and finish getting things before petting the dogs goodbye and heading back to campus where I was once again bored for a little while before going to bed.

That's all for the weekend story. Tune in next time for discussion on starting Unity class which has been quite enjoyable and fun so far.

Adios Y'all,  
– Eli