

SPIRE-EIT 2024



SUMMER PROGRAM FOR INTERDISCIPLINARY RESEARCH AND EDUCATION – EMERGING INTERFACE
TECHNOLOGIES



Hci homework



July 18, 2024



Angelica Brito Diaz

Heuristics

Normalcy Bias

Definition: The normalcy bias describes our tendency to underestimate the possibility of disaster and believe that life will continue as normal, even in the face of significant threats or crises

Design: Color

Project: In our project we have learned about how a skewed heat perception can affect the response of people during heat events. In our color scheme we included green and red which are associated with bad and good. With the red we can bring attention to high temperatures and indicate through color its danger.

Availability Bias:

Definition: The availability heuristic describes our tendency to use information that comes to mind quickly and easily when making decisions about the future.

Design: Scale/ Proportions

Project: Since we are making a weather app, the user will just want to know the weather. We decided to put most of the important information in the homepage. We have functionalities where you could learn about mitigation techniques but that is not every user.

Levels of Processing Heuristics

Definition: The levels of processing model counters the idea that mere repetition helps us retain information long-term. Instead, it suggests that information that is encoded on a deeper level, through meaningful association, is easier to remember.

Design: White Space

Project: A simple design would be beneficial to make the person focus on the most important info

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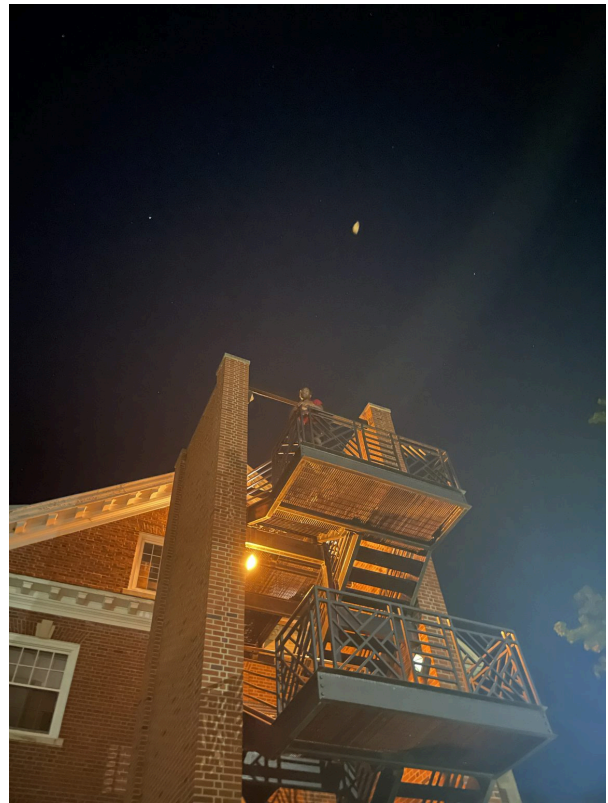
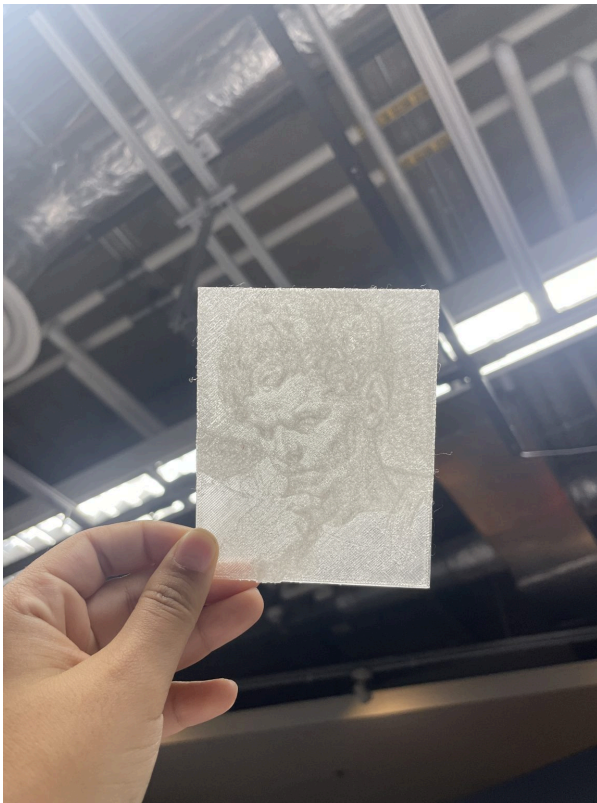
07/07/2024

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At the beginning of the week , We were working on mca work. I am happy we can get more time focusing in a single project. Alex let us run free and do whatever we want. I was a bit insecure about my project. I wished I had gotten a bit farther so I could finish the light box idea that I had. After the presentation, i think I should work on my public speaking abilities. It was really inspiring to see other people work. I am happy it's done, but will definitely miss hanging out with Alex the whole day.

Our 4th of July weekend was really fun and eventful. Should have probably slept more than I did. Did some fireworks, watched inside out two, ate some good food. Had to go to ankeny to fix an issue at chase bank. Lydia drove us . After I solved my issue , we went to de Moines. Since we wen too late to really enjoy it , we went to the capitol. On our last day, Rodney cooked some delicious food. We played horror games that later became Super Bowl half time videos





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HCI homework 2

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Research Question

- Which is more distracting to drivers: making/receiving calls or texting?

Hypothesis:

- Texting while driving will be more distracting to making call because texting typically requires more visual and manual attention compared to calls, which can be conducted hands-free.

Study Design:

Participants:

- 18-65 old drivers

Equipment:

- Driving simulator with realistic road scenarios.
- Eye tracker

Procedure

- Participants complete a baseline driving task without any distractions.
- Participants then complete the driving task under each experimental condition (calls and texts) in a randomized order to control for order effects.
- Each condition includes a 10-minute driving session on a simulated urban road with various traffic scenarios.

Variables:

- Independent Variable
- Type of smartphone activity (no activity, making/receiving a call, texting).
- Dependent Variable
- Driver attention
- Reaction time
- Number of driving errors (e.g., lane deviations, missed signals)
- Simulated accident occurrences

Measurements

- The simulator would record the different instances of accidents or near accidents, the missed signals etc. The eye tracking data would characterize what caused the irresponsible driving behaviors. Some visualizations can be made to compare the two groups

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06/21/2024

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haven't been posting so I'll do a summary again.

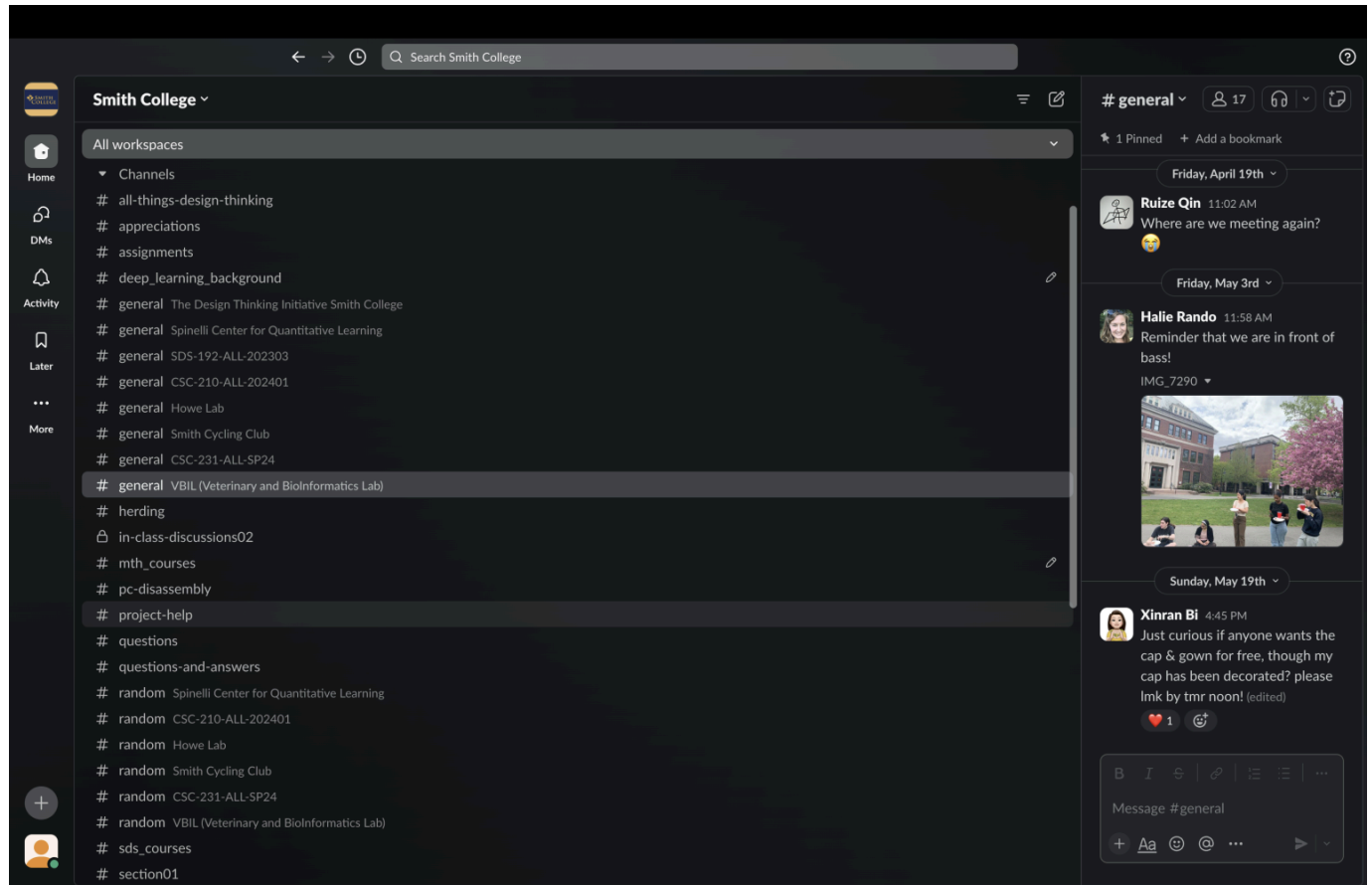
- worked on unity: finally finished with unity. Even if my blender model wasn't the best , I was still able to do basic functions in unity which made it a better experience. It was definitely really hard but learning all of the cool stuff you can do with it made me Want to go further in it. I already downloaded both blender and unity in my Mac
- luncheon lecture: Doctor S lecture was really funny . I really like the closeness that's she develops with her subjects. If I do get into research I would like to have the opportunity to develop such a relationship.It was really meaningful seeing how driven she is.
- spirited away: was pretty fun and the sound was amazing even if seen it many times. Anjali dog was literally the cutest thing.
- deeper dives: so happy I got 3D printing! Today we learn a bit of history about it . Alex opened the machine and showed us what each parts do. Here is Rodney on time out



HCI: Bad Design

 June 16, 2024  Angelica Brito Diaz

1: Slack new update



I use this interface at my college to communicate in my classes and clubs. As an user of this website the choice to organize all of the channels by name rather than by the group they belong to makes it really difficult to search for them. While some have specific names, they all have a general and random channels. In the general channels is where I have found most of our communications happen. While it is not difficult to identify in which channel the message was sent since it is highlighted, writing a message is so tedious. When I try to find what I am looking for, the font and color that indicate which group the channel belongs to is too faint for me to notice on first look. I find myself clicking in the wrong channel many times.

2:The dishwasher at our apartment.

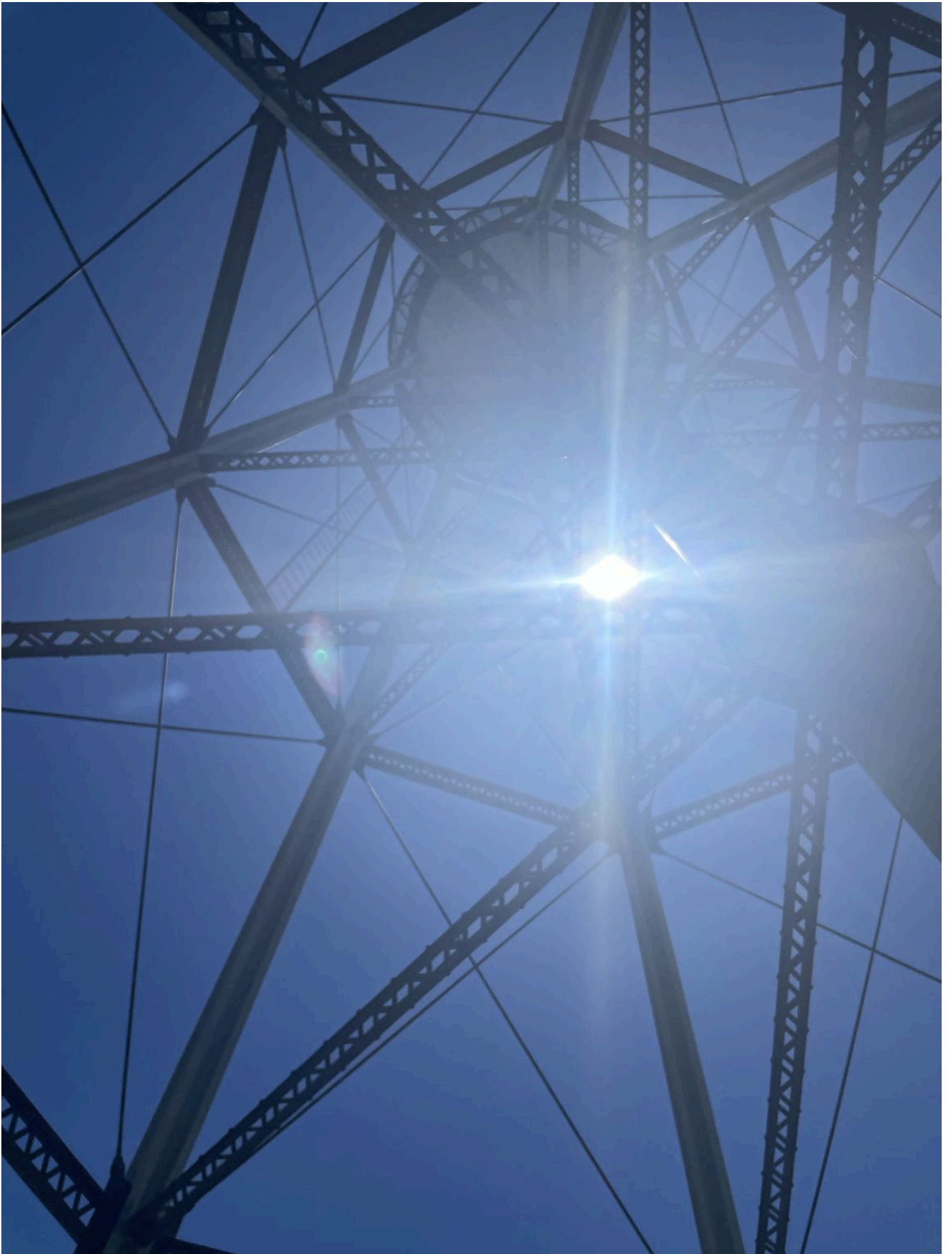
In at least two of our apartments, we have put post it notes to show if the dishes are clean or dirty. We flip it to let others know when it is done. The confusion would be prevented if we had a light to indicate it.

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06/14/2024

 June 14, 2024  Angelica Brito Diaz

Currently typing this with 8 percent in my phone under the watertower. It's nice to blog outside of our enclosure in the vac. Yesterday we worked on more blender. Me and chuchu stayed after to work on our projects. I didn't get too far then but it has been much better this morning. Before game night I went on treadmill for a 30 min run. I played some rounds of board games I can't remember. After I played a few rounds of Hades. I went with Lydia and Harrison in our bikes(while Rodney walked) to cafe Beaudelaire for some food. We talked until 11:00 pm while we ate.



06/12/2024 Angy

 June 13, 2024  Angelica Brito Diaz

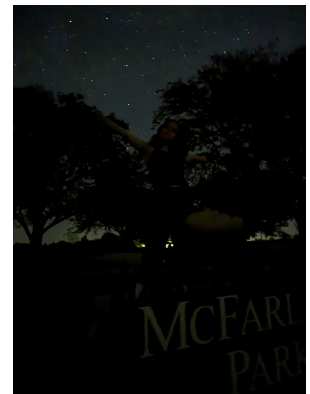
I am here and alive after a long hiatus of not blogging. Too many stuff have happened since then so Ill put them in a list:

- Blender : I am really excited to work on this software because i seen so many cool projects on the internet before. It was really intense to have it right after Solidworks. I am planning to do a scene in a child playground. Here is an example. Had some issues finding a 3D model for a baby so I'll just



simplify it with some circles. Let see how this turns out

- Solidworks: it was fun and at the same time frustrating . Alex & Spencer were really helpful and made it much more manageable . Kinda of wish we could 3D print the parts we made.
- Went stargazing: When we get to get froyo, we were all confused as to why Harrison disappeared. He went to see the moon. I get his fascination because I barely get to see it in New York. Went to Walmart afterwards. It was just me Rodney, Lydia and Harrison. Our lack of planning made Rodney almost “freeze to death”. On the way there it looked like a horror movie but it was a really good experience.



Harrison introduced me to Destin Conrad and I can't stop listening to him

- Went on the artwalk: It was more of a shopping trip rather than an art walk but I love it. Found a really cool necklace that was way overpriced but made me really happy. Bought some good tea and chocolates. Ate some ice cream with Rodney and Lydia
- Went on the ropes course: It was intense, I was super sore the next day.
- Ate barbeque: It was real good, we should eat it in the restaurant the next time.
- Went to a “Beach”: in the park that we went to eat. Stephen walked us through a secret beach. It was really fun but I was afraid I'll get bitten by a tick , never done anything like that before so I like it still.



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06/05/2024 Angelica Brito

 June 5, 2024  [Angelica Brito Diaz](#)

Some cool stuff that has happened recently was that I met our faculty mentor. He was really nice ! . Started reading some of the papers for our project and they all have been really interesting. C plus plus is going well , not too complicated. Rodney also gifted me hades 2 which has been so fun. It's a really good game. We are already super obsessed. Also met glen's dogs and they were so cute

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06/04/2024 Angelica Brito

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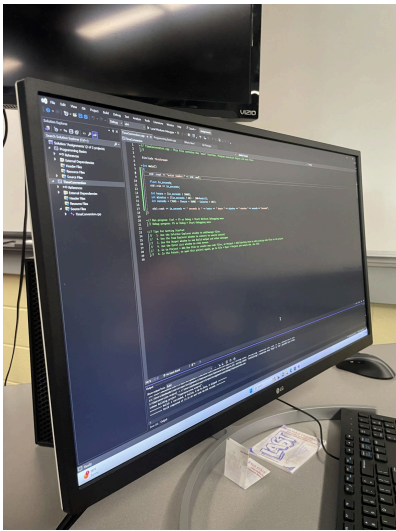
The program has just started picking up pace. We have already started with our mini course. I am really happy we are having them even if I know some of the basics from previous coding languages or my own research experience. It makes me more secure that I can tackle all the really complex parts of my projects. Also, we began to read papers on our topics for homework. It addressed some of what we already discuss in our first group meeting. Some of the issues that both of the papers I read struggled with was recruiting participants for the study. I wonder how we could account for those who experience hasn't been captured in these studies. I have also been really enjoying socializing with all of the other interns. I am pretty excited to get started with my project.

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06/03/2024 Angelica Brito Diaz

 June 3, 2024  [Angelica Brito Diaz](#)

It's the first week of my time at Iowa State . There were a lot of new sights and people. Little by little we are getting to know each other. Some of the things we did was an escape room, played Mario Kart and played Cards Against humanities. This was also my first time interacting with the VR space. Besides the demos , we went after class and played some games. We also just started to learn C++ . It has been pretty okay but I dread the time it is going to get difficult. Here are some pictures of my first week in the corn state 😊



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