SPIRE-EIT|2019 Summer Program for Interdisciplinary Research and Education - Emerging Interface Technologies (SPIRE-EIT) Calendar ▼ REU|2019 About▼ Courses ▼ Research Teams ▼ Resources **▼ Emmanuelle Hernandez** Intern Blogs Bradon Thymes
Emmanuelle Hernandez
Jennifer Patterson
Karina Bhattacharya
Kelsey Benjamin Lara Chunko Lucas Wright Nina Crosby Walton Roselynn Conrady Syema Ailia Tiger Ji Finale... Not Yet Vrinda Shrof August 2, 2019 Emmanuelle Hernandez Morales Recent Posts Wow. What an interstellar summer. It was truly out of this world. Words cannot express the impact SPIRE-EIT has had on me. Without a doubt this program has changed my life. it was definitely one of the greatest experiences of my life Future Poster Symposium Yesterday and certainly my best summer. I thank all the mentors, faculty, coordinators, graduate students, and all the behind-thescenes people who made it all happen. I learned so much in all the software crash courses, HCI, Ethics, Craft of Finale... Not Yet Last Day Its the Last Day?! It Can't be Over Yet! – August 2, 2019 Closing Remarks 8/2 Bittersweet Chocolate Research, and Deeper Dives. here's so much to reflect on and so much I'd like to say. It's quite likely I won't be able to say it all during the time I have here. I need my quiet time at night back at home where I will truly be able to reflect. I'll leave my final remarks for Tick Tick 1..
Last Dance
VR Dance Team at the when I get back to Puerto Rico. I'm not in a pensive state right now and I still have much to do (pack up my luggage, cook dinner for the potluck with the purpose of eliminating all the food left in the fridge, among other things) so I wouldn't be able to get in the right mindset anyways. Symposium
Synergy at the Symposium 8/1 See ya later. Blogging is not over yet. Tick Tick 2.. The Early Birdie Gets the Hot ☐ Uncategorized ☐ 1 Reply Chocolate Bar Last Work Day A Minnesota Monday Video editing skills are coming back to me...7/31 Recent Comments What a wonderful day yesterday. All us SPIRE interns got the opportunity to go to the University of Minnesota in Abby Boytos on Its the Last Day?! It Can't be Over Yet! – August 2, 2019 Abby Boytos on Pinale... Not Yet Minneapolis, and in the afternoon, the Mall of America. It was such a breath of fresh air to get out of Ames and Iowa in general. On the way to the university, I got to see skyscrapers, which we don't have in Puerto Rico! Just for comparison, The tallest building in PR is 288 ft tall and has only 23 floors, while the 20th tallest building, the Marriott Hotel City Center, has 392 ft and has 32 floors. It also doesn't help that the "skyscrapers" in PR mostly in the capital of Abby Boytos on Poste San Juan, which is almost 3 hours away from where I live. Abby Boytos on From a Great Here are the sources for the tallest building statistics for Puerto Rico and Minnesota Abby Boytos on Tick Tick 1. https://www.emporis.com/statistics/tallest-buildings/country/100193/puerto-rico . Abby Boytos on Bittersy w.emporis.com/statistics/tallest-buildings/city/101331/minneapolis-mn-usa Meta We arrived at the University of Minnesota. Who knew the campus would be so beautiful! We walked around the Site Admin
 Log out campus, seeing the buildings, the trees, the environment— It was all so wonderful. Later on at the 2 VR labs we Entries RSSComments RSSWordPress.org visited, we saw demos of projects from other graduate and REU students there. One of their most fascinating projects was their use of zSpace, a technology that combines both AR and VR on a desktop screen that through the use of their glasses and a stylus, you could pluck the object out from the screen and see it in a 3-Dimensional fashion. Objects we saw were a human brain, jaw, and heart. You could even make some parts of the heart transparent so you Funded by NSF could see inside it and see how the heart was pumping blood through the valves After that, both the REU students from Iowa as well as the ones from the University of Minnesota presented their projects to one another. We did not have live demos, but rather slide presentations and pictures regarding the work we were doing. It was pretty cool seeing new projects from other REU students. In the afternoon, we went to the Mall of America. We explored, shopped a bit, and checked out Nickelodeon World, a cute amusement park right in the center of the mall mostly based on Nickelodeon cartoons. On the way back, I slept in the car and listened to the conversations people were having after I woke up. The car rides to and from Minnesota were 3 hours long each, which was an arduous experience and tested my patience. Overall, the trip in Minnesota was NSF Grant #1757900 amazing and I'm really glad the wait paid off. Previous Years of SPIRE-EIT ☐ Uncategorized ☐ Leave a reply More Work Ahead July 19, 2019 Emmanuelle Hernandez Morales lay, Team Ballistics met with our faculty mentor, Susan Vanderplas and updated her on the final tasks we had been given since our last meeting on Monday. The tasks were making it so that the percentage of missing values were calculated in each partition (9 in total), and simplified the linear regression task (which I'm not going to go into details) so the program did not have to go through the entire matrix to get data for something simple I thought after this point we were pretty much done with the program. The next steps were to format the display of the results and send the project to our mentors, so that after they install it on their computers, they could run it on the bullet scans so we could start gathering data for our research paper and symposium paper (which is due in less than 2 - However, things weren't as simple as they seemed. After we had pushed the latest version of the project the day before yesterday, Susan spent all of yesterday morning, from 7:00 - 11:30 AM, trying to get it working on her computer. There were a lot of dependencies and files that were not compiling on her computer because it was a Mac and using a different operating system called Linux, and our project had been implemented for Windows. It was until after we met in the afternoon that after spending 2 more hours with us, she finally got it working. There was a lot of tricky stuff there had to be done using CMake, which in basic terms is a software development tool that lets you organize the structure and order of the files in a project, such as deciding the how folders into one another and explaining how they relate to one another. Apparently the setup for this is different for Mac and Linux and now our next goal (among a couple of other tasks involving the code) is make it so our project is cross-platform and works for other operating systems. It is after that that we can start gathering data. We've got less than two weeks to complete everything. Time to get my head back in the game and shift gears se we've still got a lot of work ahead of us ☐ Uncategorized ☐ Leave a reply **Ballistics Advancements + Networking Enhancements** 🛗 July 17, 2019 🙎 Emmanuelle Hernandez Morales It's Wednesday morning and here are some updates about Team Ballistics' accomplishments this week Successfully implemented the linear regression code 2. Completed the task of opening of the zip files in which our bullet data is stored on (program needed to be capable of automatically accessing the files of a zipped file without the user having to decompress it manually.

3. Implemented partitioning our data matrix into 3 by 3 sections which we can use to derive location-based statistics. about the bullet scan, rather than looking individually into all rows and columns or getting simplified statistic of the4. Finished writing the introduction of our research paper draft. 5. Revised our abstract using the feedback of our project faculty mentor. Overall, its been a productive past two days. As for details outside the project, on Monday I attended the professional development workshop, "How to build your professional network?" which was given by Karin Lawton-Dunn — Graduate College Career Services Coordinator. It was very informative and I learned a lot. I found out just how influential LinkedIn has become in the states. It has never been emphasized in my college career in Puerto Rico though it's still not widely used in Puerto Rico it makes sense that it is not as fundamental as here in the US. However, I am planning to move back to the states one day, so it was a great realization about its importance. I also learned about the process of conducting "informational interviews" and received general tips for improving my networking skills. I kind of regret not attending previous professional development workshops here during the summer, although a lot of the time, they did interfere with a class/schedule event in the SPIRE curriculum. Update 7/9 - 7/11 July 17, 2019 Emmanuelle Hernandez Morales Tuesday was a nerve-racking day. It was the day of our MCA project presentations. Usually for presentations, even though I may have my parts well-rehearsed, speaking in front of people makes me quite nervous until I actually am in the middle of it. The anticipation had been killing me all day. Then when it was time to for the presentations — Guess what? —They were cancelled! Actually they were moved to Thursday because they were not publicized so other faculty would come. It would simply have been presenting to each other and that would not have been the best idea because the point is to showcase what we've done to other people. On Wednesday we had our final ethics class and I implemented maps in the Team Ballistics code. On Thursday, we finally presented the MCA project. It was great to finally be over with it. I had been wanting to fully focus on the ballistics project for awhile now. Uncategorized Leave a reply My, My, How Long Has It Been July 8, 2019 Emmanuelle Hernandez Morales It's been many days and many nights. Time flies by so fast here—yet so slowly at the same time. One day goes by and woosh! You've done a lot and learned a lot the previous day but forget all details... I need to get back in the habit of blogging more even if it's just a single paragraph I had a nice Fourth of July extended weekend here in Ames. The REU had Thursday and Friday off. I got more time to relax. However, given the fact that we have our Deeper Dive MCAs due Tuesday (tomorrow), time was limited to complete it and I did come in Saturday afternoon. My DD team got the evaluation mode completed for the VRAC Lifeguarding simulation which is awesome. Right now, all that is left is to finalize the presentation, rehearse tomorrow morning, and we'll be set for the real presentations in the afternoon. Team Ballistics has gone their separate ways for a while now. Syema and Tiger are part of the Unity Shaders Deeper Dive while I was a part of Team VR. We've so been focused on our own MCA projects the past week as well as the one beforehand that we have not spent much time working on our own research project. We're pretty behind on it in regards to writing the paper, although we're on top of the coding for the most part. Thank goodness Tiger already has a draft of the research poster since it is due tomorrow. Syema and I just need to verify it with him, make some changes, and we'll be good to go. When it comes to normal life, I have gotten over that bump I felt last Monday. I got to spend time with the girls at their apartment and simply socialized for a couple of hours that Monday afternoon. I have visited them two more times since. Everyone rarely socializes anymore with people outside their own apartment on a regular day given the lack of extra-curricular activities and the increase amount in work. So, making time and visiting one another's apartment is the easiest thing to do to spend time with people. It certainly has helped me a lot. Ta-ta for now! More updates in the future Uncategorized Leave a reply HCI: GenderMag UX/UI Reflection July 3, 2019 Emmanuelle Hernandez Morales Hey everyone. For this blog post, I will be talking about the study done by Margaret Burnett in regards to gender inclusive software. For our last HCl class we were given the assignment of watching Burnett's conference video, Gender-Inclusive Software by Dr. Margaret Burnett, which can currently be found on YouTube Let me give you some background on the study. Nowadays, people use so many software applications such as: websites, mobile apps, word processing apps, and so on. If a person is in the computer science field or related to it, $then \ they \ will \ use \ many \ more \ kinds \ of \ them \ which \ are \ harder \ to \ understand. \ The \ problem \ Burnett \ brings \ up \ is \ that$ every software has features that makes it difficult for people of different mindsets to use, which vary depending on gender. One of five factors she discussed were risk averse, which means how likely someone will take an action (like pressing a button on an app) which result vs experimenting around with different options. In her study she focused on 5 different factors. Overall, it was quite fascinating to learn just how significant gender-inclusive software is. It's something that a future developer myself will be wary of in the future so that all people from all walks of life can use my product as easily as ■ Uncategorized □ Leave a reply **Untitled Reflection** July 1, 2019 Emmanuelle Hernandez Morales What else is there to talk about? What has been on my mind these past couple of weeks? I haven't written anything aside from the average recap posts which I would not describe as truly meaningful ... I just simply don't know what to blog about anymore... I keep putting it off too because that writer's block comes into play. I see my peers (from both my research and deeper dive projects) working on the projects and I get some self-pressure to do the same. Sigh. whatever. Blog time is precious. It's important. And I'm not going to ignore it any longer. I'll simply put on my headnhones and reflect I didn't have a good end of the week last week, specifically, Thursday and Friday. Mentioning all the details would take an extremely long time, time of which I don't wish to spend here in VRAC when I should be working on my other stuff. I just know I have to take care of it later...write in my journal or so for a couple of hours. I need to let out the pressure building up inside me... that unhealthy pressure. Stress and pressure is good, but not the one that makes you feel bad about yourself. May be I need to loosen up more. I'm not as social as I was during the first 3 of weeks here at SPIRE... I've kind of the second content of the second cunconsciously gone back in my shell... becoming lost in my thoughts. I simply don't know what else to talk about with my peers during break times... either I'm caught up in my own thoughts about what I have to do which blocks me out, I don't think my conversation topic will lead into anything new and insightful, or I simply can't think of anything to say when I want to have a conversation. Something I do know for sure is that the novelty effect has worn off. I re being so excited each day upon coming to "work" which didn't feel like work... each day being a new opportunity to see my peers again and learn new skills in the four crash courses we had, but that excitement is pretty much gone I've gotten used to things here. Mom, if you read this, it's not depression. It's just a phase I'm going through here entre otras costatas que tengo que trabajar. Oh and it doesn't help that we're done with pretty much afternoon activities as a group. They barely happen anymore. Those fun things I used to look forward to barely occur anymore and since it's not mandatory, only the same people come and others don't. Nowadays during the week, when we get home, we just lock ourselves up in each of our apartments and don't interact. Sometimes at night us guys do watch a TV show for an hour or two (given that we have the blessing of a TV), but we don't play Smash Bros anymore. That kind of died down. So yeah. As an ambivert, I feel like spending time with people in the afternoons used to help keep my energy up, keep me in the present and not be lost in technology and in my head as much. I miss those meaningful conversations with people, like getting to know the culture where people came from and their background So yeah. I feel this blog was pretty important. It started off from not knowing to say to becoming pretty productive. It helped shed light on some of the reasons things haven't been the same for me. The schedule has changed. I wish to be more energetic again. I want to work on the DD and Ballistics projects with more vigor. Definitely need to reflect more later. I need to tap into my subconscious and let it speak. I need to work on myself before I can work on my work to the best of my ability again. God, please guide me these next few weeks and help me make the most of them DD VR Theory and Experimentation 6/24/19 🛗 June 27, 2019 - 🙎 Emmanuelle Hernandez Morale got further into our Deeper Dive course. My Deeper Dive into VR is going well. In the morning, Jack showed us a quick run-down regarding the theories behind tracking. This includes tracking head rotation, walking hand movement, among others. There are many types of equipment for the varying types of tracking inputs, all of which have their pros and cons, but it was really cool to see what previous technologies had been built. Later on, we got to try out the VIVE sample application which allowed us to experiment with a variety of functions Unity has available. Some of them were teleportation to a specific location so the player did not have to physically move (given the limited amount of space available irl), picking up and throwing objects, remote controlling a little toy car, throwing a grenade that sends out flowers, and using a bow to launch arrows and hit targets. On the home me there was even an option to use an ink pen to be able to write and take notes in the air! In the afternoon we're going to further plan ideas for the Deeper Dive course project and hopefully decide on one Hope it goes smoothly VR on a Dark Rainy Day - 6/21/19 June 27, 2019 Emmanuelle Hernandez Morales It's Friday. Yay. —Or so it would have been if it hadn't been raining. The rain started the morning badly. I got my shoes and socks all wet on my way here. I had to hop over streams and puddles while navigating through parking lots because before I rode the bus to VRAC. I had to walk to one of the office buildings in front of my apartment in order to get my check. It didn't help that I went to the wrong building first until I texted my internmates. It was then that one of them responded that it was the one further down the street—not the one directly in front of my dorm like I was told. This only led to more walking and getting my shoes even more wet. But hey! I finally got my check after 2+ weeks chilling in a file cabinet and I was able to make it to VRAC on time. So that's a win. At VRAC, we finally met in our deeper dive groups. I finally got the opportunity to study more in depth the field of technology I for a long time have been wanting to work with. Gaining the opportunity to work in the VR field was the main reason I applied to SPIRE and even though I did not originally get put in one of the two VR research project groups, I'm happy things came around and I get to work on VR regardless. —It's not to say that I'm not happy working on the Ballistics project, which I am very content with by the way. Rather, I just always wished I could take a more active role in the VR field by working directly in it. ☐ Uncategorized ☐ Leave a reply DD Team VR Project - VR Lifeguarding 6/26/19 🗎 June 26, 2019 🙎 Emmanuelle Hernandez Morale Today we finally made our minds and set upon one central idea in my Deeper Dive group. After many hours brainstorming, meeting multiple times with my team members, and combining and discarding ideas, we ultimately decided (upon considering the advice of our mentors) to go with the VR lifeguarding one. We had a number of other vere interested in, but the lifeguarding one was the best overall. It has a lot of potential for good, involves various VR concepts so we can get practice in VR tech, and we can easily divide our work into different parts so each team member has an adequate amount of work without much dependence on the completion of the work of other members. After that, we made a list of tasks that need to get done and divided up the roles for the first part. Overall, I'm feeling happy about the direction of the VR project. We have a little less than 2 weeks to finish the entire thing before we have to make a final presentation on it. I like my peeps. I'm fairly optimistic we'll finish it all in time. It's going to be fun. Uncategorized Leave a reply Unity pt 2 -6/19 & Emmanuelle Hernandez Morales 🛗 June 19, 2019 It's the second day of Unity and it's gone nice. It feels a little fast since we don't have much knowledge of C# syntax in Unity so it's kind of hard to write scripts. Aside from that it, it hasn't been too bad. Also, we got the XML parse running in my group's Ballistics code. Tiger got it actually. Now we can access a matrix's dimensions from any binary file and don't have to hard code in the values in order to get the data completely. Yay. ☐ Uncategorized ☐ Leave a reply **Halfway Point Reflection** 🛗 June 19, 2019 🙎 Emmanuelle Her Emmanuelle here. I've been thinking. We're almost halfway through the REU and I've been thinking about what the future entails once the REU ends and what I want to leave behind 1. I will have completed our REU project. Or I should say— we will have completed our REU project. The ballistics team will have left something behind future researchers can use for the betterment of the forensic science field. It would be nice to have made a lasting impact. Aside from having something nice to put on our resume, it's the positive impact that counts. It's the difference that matters. 2. I will also have learned a lot from the courses I will have taken here. The skills will be a big help in my courses I will have taken here. Thank you. I hope to use them for good. 3. Memories, stories, and the impact of my peers. I know I won't forget them, their stories, all the lessons they taught me, and so on. I'll cherish the memories for the rest of my life. But... there's a bittersweet feeling to it. I'm going to be realistic. There is a bittersweet feeling with this because, with all likelihood, I won't ever see them in. We won't ever see each other again. Friendships will dissipate and unless we live in the same state, meeting up won't ever happen. Bonds will be lost and I shall be forgotten. I don't mean forgotten in the fact that they won't ember my existence. I know I'll remain in their memories of the REU experience. But rather forgotten in that I will be pushed out their mind, never considered to be contacted again, and the communication will be lost. That's what's always happened when I've moved places. After leaving Boston and American University in Washington DC, I lost all contact with my friends. People have no intention of staying in touch with their old friends. Even best friends split apart after high school. People move on. Their lives continue I can't blame them. It's human nature. It's also certainly part of the American culture. Heck, I didn't reach out to most of them. But the for couple that I did, we talked once or twice but that was it. They stopped caring and moved on with With that being said, I'd like to bring this back to my REU experience here in the present. All I can do now, here in the next couple of weeks is leave a positive impact on the lives of my peers. I hope they learn lots of things from me relate to my life stories, learn from my Hispanic Puerto Rican culture, and even discover more about themselves that they would have not before. That's all I can do. I won't hope or expect our bonds to continue after we depart from here and our journey together comes to an end. Such hopes would only lead to disappointment and sadness if they fail to be realized. I don't want to miss them any more than I have to. With the expectation that I'll be forgotten, It would be easier to move on with my life and not hold onto the past. Most people stay in our lives for a set time. Most friendships don't last forever. I've learned that. I've accepted it. And I cannot hold onto my past as I did when I left AU. I'll have to forget meeting my REU peers again after we've left. It's my only way to move on without looking back with the desire to go back to a time I won't be able to go back to. I just have to be thankful for the experiences I will have received and not be sad that it ended. Dr. Seuss once said, "Don't cry because it's over. Smile because it happened." This quote describes it perfectly. But who knows? Maybe some friendships will persist. But the possibilities are extremely low I don't want to hold onto any hopes for fear of being let down once again. It would only hurt more than the depart But now let's come back to the present. I will continue doing my best here and continue leaving my impact—Continue Uncategorized 2 Replies Update: The Weekend, Last Week and This Week 6/12-17 🗎 June 19, 2019 🙎 Emmanuelle Hernandez Morales A nice relaxing weekend it was. I got to sleep in Saturday after not getting sufficient sleep the previous week. Later on at night, we round up a group and went to a hookah bar. It was my first time going to one and I had no idea what to expect, so I was a wee bit nervous but I enjoyed the experience. We had great conversations and we had a great time. I got to know the others more, listen to their crazy experiences, and watch the newbies failing to make circles and make fish mouths. We stayed there for about an hour and a half before we left. We walked around the block exploring what stores there were in Campustown before stopping by an ice-cream store The next day, Fathers' Day, I slept in again (having gone to sleep late once again). I ate brunch and then called my dad and had a conversation on the phone with him for an hour. Later on, I biked up north for about 20 minutes to reach a Catholic church I had never been to. I attended mass from 5-6 PM which was in Spanish, my first Spanish mass since I got to Iowa. Then I ate at Papa Johns nearby before biking all the way back to Frederick Hall. It was Last week, we learned Maya. It was awesome-way better than Solidworks. Much more creative freedom. Now, this week we are working with Unity and taking the models we worked on in Maya and making them do cool stuff in Unity. I look forward to this next unit. Rotten Vending Machine - Bad Design Example - 6/14/19 June 14, 2019 Emmanuelle Hernandez Morales Time to make the HCI blog post about bad design real quick so I can get back to finishing my Maya project. It's 9 PM and I'm still at the lab and I'm so hungry right now, but I know that if I don't write the post right now, I will likely not do so later. So here goes: The vending machine that Vrinda, Bradon, and I went to during what was supposed to be a 5 minute break to get some snacks (it was 4:00 PM and we were starving then) turned into a whopping 15 minutes! There were so many problems with the machine, it was just outrageous 1. The prices were not labeled on the items. You could only find out by entering code on the machine which is a waste of time if you only had money for something cheap. 2. The prices were irregular and obscure. The cookies I bought cost like \$3.20 which not only is super expensive, but the machine was practically begging for change. But like a junkie on the street, I wasn't gonna give it to him 3. The machine only accepted ones! It wasn't until after I tried to put in a 5 dollar bill that the machine said so. Did it not have any change left? It it didn't or simply not accepted anything higher than ones, there should have been a message that said so on the machine like there normally is on vending machines that are fully functional. 4. The item numbering system was terrible! Didn't the creators know that people read from left to right and not top to bottom? Why did the numbers on the top half increment by 20 each item to the right and then by 10 on the bottom. It was so confusing trying to understand what was happening. What was worse was that the ID code of cookies I wanted were being blocked by the wrapper. I had to figure out the numbering system on the spot especially since we were pushing it on time. I eventually gave up and decided to bend down to see what the id was since the cookies were on the second to lowest row Overall, the vending machine was designed really badly and things could have been done way better. The solutions would have been to label the prices, have a consistent system that increases by 1 from left to right, have even prices, and have message that tells the user the accepted bills on the default menu HEEZ IT Insert Money **Press Selection Buttons** Selection 4 8 5 RESET Uncategorized □ 1 Reply SolidWorks? More like LiquidWorks - 6/10/19 🖮 June 11, 2019 🙎 Emmanuelle Hernandez Morale Yesterday, we got our first introduction to SolidWorks. So far, it's been quite tedious to handle. It is definitely sting as it has a bunch of uses and it looks really cool once you understand all the tools, but it has not gone well for me. There are so many buttons and places to click on the shape that it is all sooo confusing. Plus, the options change if the object is a 2D shape or 3D shape and if you do not click on the right option, the next steps might not appear. Oh and if you forget to exit the sketch mode, some options won't appear and you can spend the next 10-15 initutes trying to figure out what they did not appear. There are so many intricacies with SolidWorks that sometime the tutorial doesn't help with even though it tries to be straightforward for the most part. I am not getting solid with SolidWorks. I'm still in the liquid phase slowly building my way up (or more accordingly, down) the solid phase. Regardless, it has been a positive experience overall. Weekend Activities - Smashing the Ropes Course - 6/8-9/19 🗎 June 10, 2019 🏻 🚨 Emmanuelle Hernandez Morales It has been quite an interesting we kend. So much to write about. So little time. So few ideas. Everyone else's blogs are so interesting... They have all been quite pleasant to read. Well... Let's see what I can come up with the second control of th Friday, we did more C++ stuff. It covered the topics of classes and class inheritance as well as a culmination of all the C++ lessons we did previously. Not much to say about this. Saturday, we went to do the ropes course, did team building activities, went on a swing several stories and climbed wer course twice. It was nice. Even though I have a fear of heights it's greatly diminished when I have a harness. But the best part of the ropes course was the fact that I made it to the top even when I didn't believe I could make it past the final part (climbing up a rope when I haven't done pull-ups in so long). But I managed to do it. Yay. Saturday night I watched A Star is Born with my peers. Sunday, I went to church in the moming, GameStop midday, ate at a Mexican restaurant right after, and rode the bus back to my apartment. Then in the afternoon, I washed my laundry and kicked my reommates' butts played with my roommates in Smash Ultimate. It was an tiresome day since I rode my bike far from my apartment to church, to GameStop/Mexican restaurant, and then to the nearest bus stop which was still a fair distance away. But it was an enjoyable day. That's all I've got for now everyone. Until next tim Day 10- Project Lead- 6/7/19 🗎 June 10, 2019 🛮 🚨 Emma Hey guys. The Ballistics team finally got a lead to work on. We now have an idea on what to go about doing. For the past week I'd say it was mostly focused on familiarizing yourself with the concepts of the characteristics of fired bullets, guns, and the scanning procedure as this information is fundamental to the algorithms we're going to becoming up with in regards to determining what constitutes a good scan of a bullet and what doesn't. Now our goal is to open the X3P, C++, etc. files on our computer so we can get an understanding of the pre-made C++ library for bullet scans created a couple of years ago. It is then that we will be able to use them to determine the number of missing values in a scan. Missing values occur when the light emitted by the scanner does not reach all the way down to the base of the bullet (the bullet is not completely round since it has high levels, low levels, and ridges). The anatomy of a bullet is complex. I might post a picture of one in the future. Anyways, there are many reasons the light does not go all the way down and being able to quantify what those reasons could be and have a program judge them requires very careful deliberation. The next step would be to calculate the number of missing values relative to the total number of values in the scan which would give us a percentage. Then we can use that percentage and estat a threshold for what percentage of missing values can there be before it stops being a good scan. But that's later on That's all for now guys...Hope the explanation was clear. Uncategorized Leave a reply Day 8 + 9 - C++ , Luncheon 2, and Reflection - 6/5-6/19 Hey guys. I have not really been as interested in writing a blog these past few days. I have not had much to say except nary of what I have been doing. But I have not had anything meaningful that's come deeply from my hear recently as you have probably read from the past couple of blogs. To summarize these past two days, vesterday for the most part was focused on C++, and today we had a luncheo with Evrin Baran, a faculty member here at ISU. Her expertise lies in educational technology, human computer interaction, and learning sciences. Her research lies in designing strategies involving the use of technologies in order to improve education in today's environments. She also teaches online courses on online learning, evaluating digital learning environments, and instructional design. Overall, she does many cool things and to put it simply, she teaches I feel like I have gotten accustomed to being here at SPIRE-EIT. I've gotten in a rhythm. I ride my bike each morningor so I used to until it came up missing this morning. I hope the person who took it brings it back after today realize it's not theirs. Maybe they confused it for their bike since there were two other bikes of the same color pattern (blue on one half and white in other half). Hopefully they bring it back.. Uncategorized Leave a reply Ø Edit Day 7- Geocaching and BBQ- 6/4/19 🛗 June 5, 2019 🙎 Emmanuelle Hernandez Morales In the afternoon, we went Geocaching around a hiking trail and had a BBQ afterwards next to a lake. Geocaching is when you look for hidden objects people have left some ewhere in public spaces usually in nature areas. It's similar to treasure hunting. There is an app for this which in it holds the location of all the Geocache sites and by using your GPS location on your phone, you can look for those spots. The rule of thumb is that if you take the "tree spot, you have to replace it with one of your own. Sadly, all the "treasure" we found was pretty much trash. There was a tire wrapped around a tree (that couldn't even moved), a chunk of rusty pipe, and a bench that worked like a swing (like the swings kids use at parks but instead of an individual seat, it was a mental bench people sit on at parks without the legs and it was attached via chains to the wooden support beams. The real treasure we got was all the views we got to see while we were walking. Down below are just some pictures we took. After that we had a pleasant BBQ dinner. Overall, it was really nice to spend some quality time with my new friends. I really enjoyed the afternoon trip. 🙂 Edit Day 7- Lunch with Eliot Wi[e]ner - 6/4/19 🛗 June 4, 2019 🙎 Emmanuelle Hernandez Morales Today we had Craft of Research in the morning. We learned more about what it means to conduct research. To be specific we learned about what factors make up a good theory consists of, the importance of having an open mind to new knowledge since theories can change over time as new discoveries are made, and what mistakes can happen if people base courses of action on "common sense" if there is no real supported theory to back them up. We were also able to practice writing our problem area paragraph for our group research projects incorporating the key pieces of info that need to be included in them. After that, we had a lunch presentation from Eliot Winer, the Associate Director of VRAC, where he told us his story of his life in regards to how he got to where he is now. He told us what path he took from high school to get where he is now and emphasized how certain small details actually influenced the course of his life. For example, it was because a certain class in graduate school he took did not meet on Monday that he decided to take it. It led him to develop a good relationship with the professor and after working with her on research stuff for awhile she recommended him to do VR stuff back when it was not a thing. It then in the future led to him where his now having worked at VRAC for 10+ Uncategorized Leave a reply Day 6- C++ + Getting to Know Others More - 6/3/19 June 3, 2019 Emmanuelle Hernandez Morales Today has been a pretty laid back day so far. This morning we got an introduction to C++. I took C++ for 2 semesters at my University in PR, so the review was too simple. But here at SPIRE-EIT, the C++ course is a crash course so it's only going to get more intensive from here on out. It would serve to brush up on my C++ programming skills, as well as learn things I might have overlooked in then past or not understood well. I'm not too stressed out about it anymore. The grad student teaching it is really smart and there are other students here in the program with me who have taken C++ too. I can ask for their help too Even in the short time span we have been working in C++ (learning Hello World, understanding basic syntax learning how to print on a screen, commentating, and couple of other basic things), I have been able to see what good practices other CS students have developed from their programs in other Universities. At lunch time we ate. But I also got to talk to my other peers and got some backstory into their lives. I learned how they got into Computer Science, and what twists and turns their lives took which led them get to where they are today. It's kind of refreshing to know that I am not alone. My life has had its fair share of obstacles and events that have made $my\ path\ not\ so\ straightforward.\ Seeing\ how\ others\ have\ overcome\ theirs\ and\ simply\ the\ fact\ that\ they've\ opened\ up\ overcome\ theirs\ and\ simply\ the\ fact\ that\ they've\ opened\ up\ overcome\ theirs\ and\ simply\ the\ fact\ that\ they've\ opened\ up\ overcome\ theirs\ and\ simply\ the\ fact\ that\ they've\ opened\ up\ overcome\ theirs\ and\ simply\ the\ fact\ that\ they've\ opened\ up\ overcome\ theirs\ and\ simply\ the\ fact\ that\ they've\ opened\ up\ overcome\ theirs\ and\ simply\ the\ fact\ that\ they opened\ up\ overcome\ theirs\ and\ simply\ the\ fact\ that\ they opened\ up\ overcome\ theirs\ and\ simply\ the\ fact\ that\ they opened\ up\ overcome\ their\ they\ overcome\ their\ they\ overcome\ their\ they\ over\ opened\ up\ overcome\ their\ they\ over\ opened\ up\ over\ o$ about it helps me trust them better. ☐ Uncategorized ☐ Leave a reply Day 5 - A Letter to All - 6/2/19 June 3, 2019 Emmanuelle Hernandez Morales Day 5 - A Letter to All - 6/2/19 Hey gurs. I've been thinking. I have decided to continue my bloss worthing writing them on paper, It's so much entirer to to indo my inner self and be more reflect more I write rather than type. I wouldn't say I am old fushloned There is something special about writing slowly, feeling the mo strokes of my pen across paper, and transfering the words from my mind on the sheet. Like I have mentioned beforehand in regards to the expressing one's feelings and thoughts, I find it much more aftering to do it by writing. My apologies If they are harder to read this way, but I have to do me. And trust me, my post will have better quality this way. I have much to say and such a short amount of time. I need to sleer for tomorrow but I want to speak. There is so much to say. Idk who to refer it to. I want to unite a message to all you readers / future readers, my Peers here at SPIRE-EIT 2019, and even God. So, I write a letter- in no particular order. I will let my thoughts flow and the order come out in the naturally So, here goes, Dear God, renders, and peers, Hey God. Thank you so much for the opportunity to be here at SPIRE-EIT. Ever since I got accepted, I have been working so andously to come. I couldn't help but day dream and feathsize about what it would be like here If he been so great the far. I have had so many amy Dis experiences. I've met people from all over the US, people from all rocks many rockes and backgrounds. It's been so long since I've been through in a group so diverse. Actually, I can't remember being in a group as a diverse as this one. So thank you, God. It's such a blessingcertainly among the biggest in my life. This summer was the final summer which I had the opportunity to do something amazing and I am so eternally grateful it got to be at a UR center as amazing as the one here. There are so many resources and will make the most of it. The friends I have made, Ewell... I can't oblabel them as friends yet, but I trout them a lot. I've grown to trust them a lot in so little time. They all seem to be really good and genuine people. It's crazy. I did not expect them all to be so wice. I am neally amazed at just how good and considerate they all use. The mentor here are so heleful and the graduate so are the graduate students and people in charge here. Thanks again God. I assomedines feel I don't deserve all the blessings I have received thus far-and I ment not deserve them. But you are so compressionale and generous that you gave me this opportunity and I do want to make the best of it. You have given me so many gifts and strengths, I know I must can put them to good use. I know my faith in row, my generosity, my compression for helping others, my honesty and openhess, and my positivity can make my peer happy and help them have a better time here I know I have been able to have a positive impact on people here so fix and I am thankful for that. Thank you Jesus. Please direct for your goodness. Like what St. Paul said in Eglations 2:20 - ".. it is no longer I who live but Christ lives in me; and the life which I now live in the flash I live by faith in the Son of God, who loved me and gave Himself up for me I'm no sount. I'm not trong to say that and I'm certury not explying misself. I'm not a perfect Christian, but it's the path to sunctify that all Christians are called to follow which I am following. Thanks for my Catholic youth friends and the Catholic community back in Moca, PR. Ther've changed my life and many people there have a faith so much stronger than me. And they are such good and genware People. Some are even younger than me. I'm glad to be a part of their group though over there I am certainly more of the exvet type So yeah. Thunks God for all the lessons I've learned there, all the friends I've made, and for letting their sencity and treats ryb onto me. Though I know I have been working hard stace to be a better person and I am slad I've been able to impact the people here. These are some of the biggest strengths I have as a person here and I must remember my special qualities and just how special I am when I feel stuck/useless/dragging my team believe in our project. But that's part of the reason I am within this letter/reflection. I need to get all my thoughts out so I Can continue having an optimistic attitude. I mucht so have to sacrifice some cleep tonight but it will me better for me p the long men. It will help me manage consider and stress and lessen the pressure on me if I firmly establish all the Possitive Hungs. Plus, there's supportive peers who would help me tike take some of the load off me to so the weight on my shoulders isn't so great. So year, Therite great people - amazing people. I don't know the faculty that well, but I hose ther're like that too. I've spent much more some with my peers and project-mates so I trust them more. I just don't want the faculty (leaders' authority have an indirect negative pressure on me. There was a lesson recently that having an authorithtive relationship with the faculty I grad students in charge of the project hampers performance and project obtaining They SPIRE-EIT would everyone to see each other on an execut level so I must try to see the faculty like that too - in 9 more friendly manner - despite my past experiences, that way I can do better. So reach, Sorry for the lack of paragraphs, gurs. I hape it hasn't been too confusing to read I'm writing from my heart so I'm not exactly cure when to stop and start a new one. Not I can so back and fix them since this is not a computer. so you'll have to manage, I guess, as I get back into reflecting Liournaling again. One more thing. I'd like to say a couple of words directly to my peers, though I'm sure only a few hight read them. These thoughts are my honest apintons of course. They've been an my mind and dormant inside my heart but I would hever say them directly in person. I'm just not able to articulate myself that well verbally. So yeah. Here's what I want do Thanks a lot everyone. I am so happy to be a part of SPIRE 2019. I am glad to have met rill. You are such cool and honest people. I didn't expect you all to be so have and supportive My American peers and thrends back in wish school weren't not set as supportine and I even felt lovely as a result I was also more closed back then and less open and in douch with my feelings so that also was a factored in. But anywars, this is about you guys. You've made such a big impact on me in such a short amount of time And I am so grateful for you all Thanks for accepting me and I am really happy to be a part of the group. I want to continue setting to know each and every one of you on a personal level. I'd like to know your stories, where you came from, your quirks, hobbies, dreams, fears and even struggles you're overcome. Stories are powerful. It's like when you're walking through a field of snow. If someone else har stepped on it and made a trail to the destination, it's much easier for you since you can follow to their footstess and not have to create a new path. Stories are like that. If you know the path someon else has taken, you can use It so do get to your destination as well I've got another metaphor. Similarly rex if you see a person moving through a field of show, you don't have to follow their foodsteps But not knowing that ther've made it that far ahead can inspire you to take your own path steps and make your own park which will only serve to inspire others behind sor as they wall through the cold knows field filled with deer levels of snow. My friends, we've all come across different walks of life. We all come from different places. If anything, I hope we can all learn to be more honest with outh other and share the paths we have taken to get to where we are now. Together, we can help each other see the future more clearly and see what are the next steps we want to take in our Thank you all for reading this (including all readers not from \$PRIRE) My SPIRE friends, I know we'll continue having a great summer and I know we will do an amazing job in each of our projects. Trust in your abilities. You may not believe in the abilities you have now, but through future training in the classes sust watch. You will be able to combine your skills that you have gamed in your unique bachelor's degree concentration courses along with your talents and abilities as a person, and my fuse them with the skills you will learn here. Your unique level of Hinking will other through and you will become proud of what you will achieve I'll end it here. I've pretty much relieved of myself of everything on my mind. Just remember, when the going gets bugh, talk to your peers. Talk to those you trust. to you can count on me too if you ever need arrone to talk to or just listen. I will be there for you, i Good night everyone. See Y'all tomorrow. I will Pray for each and every one of you. — Emman and ☐ Uncategorized ☐ 2 Replies Day 4 - My Vow - 6/1/19 🛗 June 2, 2019 🙎 Emmanuelle Hernandez Morales Hey. I'm gonna be real on this post. This isn't gonna be another of those lighthearted posts of what I did recently and how good it has been. I have a couple things I need to get off chest as they've been haunting me knawing at my insides these past two days. I must get them out. I can't simply bury them within me or they'll resurge later on causing ns. They want to come out. So therefore, I will let the Right after lunch Friday, each SPIRE-EIT intern met with their team of mentors who are going to be helping and overseeing their group's research projects. All the groups with their faculty and graduate students met in one conference room and the do-director of SPIRE-EIT and VRAC gave a really important presentation with the purpose of improving our teamwork in the long run. One of the activities we did in the middle of the presentation were brainstorming in groups, fears/concerns each person has about research and sharing them. The other was reflecting about traits about ourselves we can't change and others that we could. The purpose of the second one (if I really correctly) was to accept that there traits about ourselves that we cannot change that can affect how we behave So, since Friday's meeting with all the groups talking about each person's fears regarding their future experience with the project, I have come to realize my own. I've carried a lot more than just my luggage when I came here to lowar I've carried the baggage that lies within my heart. es, my doubts are some of the things I've carried within me. You see, I am the only hispanic person here in SPIRE-EIT, and one of only 3 minorities. Although I am proud of my Hispanic roots as a Puerto Rican, I feel like being the only one here gives means like I have higher expectations. I know it's not true, but that's how I feel. This expection ties into another, albeit negative, reason that's driving me to try my hardest This next reason is that I don't want to fail my teammates in our research project. I am in the computer science field and I must represent that well. Plus, I don't feel like I am fully prepared for the research project. I haven't taken the full advantage of my education in PR, despite its limited resources in my university back home relative to most colleges in the US. And I'm not the that skilled in programming overall, which is I think is my biggest weakness and doubts I have on myself. I'm not confident in my skills as a programmer, despite it being an integral part of of a computer science degree. I'm worried this might set me and my team back, especially since I'm the the only CS major on it. I've placed these expectations on myself to do well because I don't want to let my peers and faculty down, which are all really nice. I've been given so many opportunities here and I must pay it all back by being successful in the project. Failure is not an option for me. So that's what's up. I'm in a tough predicament of self-pressure because of my racial identity and also because of my lack in confidence. The second reason is actually the biggest factor that's holding me back. -But on the bright side, I really like helping people and I'm really driven because I want to make an impact here. I want to leave SPIRE-EIT having made a difference and knowing that I will have helped future 3D scanning praction of bullets having become more easy which would save so much time and speed up the advancement of forensic science in regards to the identification of shot bullet characteristics. This hope is something I ride on. I also want my peers to be happy, and this includes everyone, even my peers who are not in my n group. I want to have influenced them for the better, even if it's just a little bit and subtle. We've only got 9 more weeks here and that's one of my goals I have here. Even if they forget me, when we go our separate ways to our homes in whatever part of the US they're from, I only hope I served to make a difference in the time here, liking helping them become more open to sharing their feelings with others, which serves to foster communication and bonding. I hope my openness will help them see that. It's one of the reasons I expose myself a lot (which is an accurate trait of the ENFJ's in the "academically unsupported" Myers-Briggs test). It's to help be themselves more Well, that's all I've got for now. It's pretty late in the morning (Sunday 2:24 AM) and I've got to get up at 9. Thanks for reading and I hope you've taken something away from this blog post. I'm just keeping it real. This is me. This is who I am. This is Emmar Take care everyone. I'll make more "real" posts in the future when I have the time and if I need to get something off my chest. I think I have expressed most of my thoughts and feelings and I'm more relaxed now I'll work hard and do my best here at SPIRE all while having fun and helping others in the process. I will make the most of this opportunity. That I can say with certainty. Good night people. Until next time Day 3- Augmenting our Reality 5/31/19 Today we were able to try out VR equipment and see what graduate students here are working on. The experience was amazing to put it bluntly! It was really cool to find out how many different projects there are. I would go into details but I'm afraid it's confidential info. One of the coolest experiences I have ever had and certainly the most amazing VR yet was the opportunity to test out out the C6 Room. This a white room with all 6 sides having the ability to function. 4 projectors work on each side to project the images. It works like a real life VR room with the use of 3D Googles and it seems really lifelike. The cost of the operation is really expensive given how long certain materials last and how pricey they are to replace them. An $hour\ operating\ the\ C6\ costs\ \$625\ and\ my\ group\ stayed\ in\ it\ for\ 20\ minutes.\ Therefore,\ it\ was\ a\ real\ privilege\ being\ stayed\ in\ it\ for\ 20\ minutes.$ able to have that experience for free. It was an opportunity that does not go unappreciated and I am really thankful for it. It's something I certainly won't forget and only served to strengthen my desire to work in the VR field. Something else we did today was learn how to use the ISU library online website. We got to learn how to look for research articles, how to get from one page to another, etc. This info will certainly be useful once we dive deeper into our projects and look to see what other people have done before. Overall, it's been a good day so far. We ate lunch at the same buffet we've been eating these past 3 days (there's so much variety you couldn't get tired of the food, at least, not for awhile). The people are really nice and they really appreciate all the questions we ask. I don't feel like I ever ask "stupid questions" as they love to feed our curiosity and really showing what it is they're doing. Day 3.5 Hey guys. It's pretty late at night and I still want to say a couple of things. I feel like it's going to be very important to me v on to be more honest with myself and reflect more deeply. It's going to grow mor

here on out and I need to mentally prepare myself for it. There's a lot of worries and concerns I have which I will talk

Also btw, I don't mind being so honest about my thoughts and feelings. I feel like if future readers can get a feel for what I went through, then maybe they won't feel so alone as they undergo their path. Stories empower people. Getting to know the path someone took to get to where they are, especially if it's not the straightest of paths, is really inspirational and even more if you can relate to it. I have already met one person here who have really impacted me with their story. They have quickly become someone special to me whom I can trust wholeheartedly, even though it's

Hey everyone. My name is Emmanuelle Hernandez and I am interning the summer for the Ballistics research team in the SPIRE-EIT REU program here at ISU. I am from the University of Puerto Rico in Arecibo and heading into my fourth year in my computer science bachelor's program. This is my first REU experience and I am very excited to be

Virtual Reality has always been fascinating to me. Even when I was little when virtual reality tech had not existed yet — or even my knowledge of virtual reality for that matter — I had always been dreamed about being immersed an actual video game and feeling as if I was physically there. I had dreamed about lucid dreaming before and always

So upon finding out I was accepted to SPIRE-EIT I was ecstatic! It's been an amazing 2 days so far (we had our first full day yesterday but didn't start blogging until today, our second day). I look forward to the entire summer and I vow do make the most of the opportunities here and apply the utmost of my ability to my group's research project.

Good night for now. It's late and I can't continue writing. Until next time

Day 2 − A New Journey 5/30/19

May 31, 2019 Emmanuelle Hernandez Morales

wondered if there was a way to make it more realistic

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Uncategorized Leave a reply