

Brian Hanson Jr.

 projects.vrac.iastate.edu/REU2016/people/interns/brian-hanson-jr/

Just waiting on it...

Posted on [July 26, 2016](#) by [bhanson1](#) July 26, 2016

Dear SPIRE-EIT Blog,

Today is my ITS group's second to last research meetings with our whole ITS team. I will update how the meeting goes after.



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So now that my research meeting is done I am very happy to say that everything went pretty well. Initially, the rest of our larger team was talking about the recon task which went on for like 55 minutes and it seemed as though we weren't even going to get to present anything. But when we did it was really great! So Eliot was there to go over the information we had and he really liked what we had. He explained that he had a different perspective on how he was viewing the quality of what we were presented compared to 4 weeks ago when we scrutinized everything we even said. With that being said it feels really great to be on the "other side" lol.

I also completed a study day for the Cognitive Assistant group and I was their first pilot test! It took a total of 2 hours and 55 minutes to complete but I kinda expected this as this was their first run. I gave them really great feedback on everything they asked me questions about. I can't say too much about it as they wanted the next participants from my group to not have any idea of what to expect. But I hope they do well with the data I was able to give them.

Sincerely,

Brian D. Hanson, Jr.

Today is Catch up with a Teleconference for USC

Posted on [July 25, 2016](#) by [bhanson1](#) July 25, 2016

Dear SPIRE-EIT Blog,

I do not have much to say today but I at 2 PM we have a telecom conference presentation with the University of Southern California (USC). I will update later on how that goes!

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Our presentation for the Teleconference went pretty well. We presented alongside our other group which was the Cognitive Assistant. We only had 7 minutes to present out of 10 which left 3 minutes for any questions that could be asked. Both of our teams did really well in presenting our information to the students and faculty of USC.

Interestingly, the USC had some projects that were similar and very unique compared to ours. The main project that stood out to me was DINE. This project is an acronym for Data-Driven Interactive Narrative Engine. This is a really cool topic as I feel like the students who were working on this project could have been English majors with a Computer Science minor or vice versa. The idea behind this project has been reflected in many kinds of games by that have a role-playing design with twists and turns based on decisions you make as the protagonist. I have played a game that really honed in on the story telling feature which was called Minecraft Story Mode. I really like the way how this story was told and it grabbed my attention immediately based on the plot twists

and decisions you could make even though I feel like I would not really explore the other kinds of decision paths.

Pretty much this has concluded my day, and now I am working on literature review section for ITS.

Sincerely,

Brian D. Hanson, Jr.

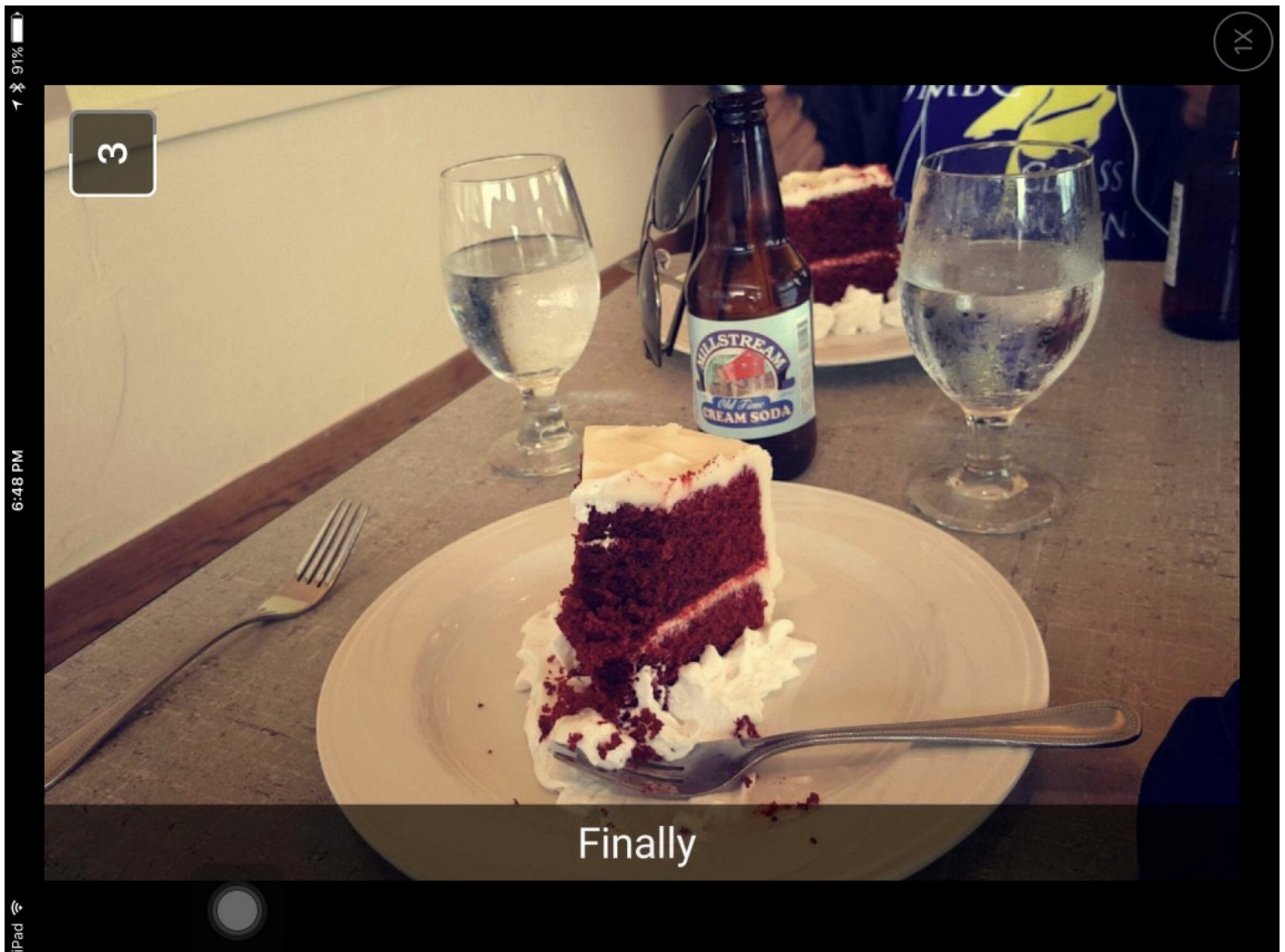
7 Things That Happen When You Are In Field Trips, And A Controversial Luncheon Lecture

Posted on [July 20, 2016](#) by [bhanson1](#) July 20, 2016

Dear SPIRE-EIT Blog,

I would like to provide some information based on experience over the past two days. Here is some background information on the past two days: On Monday, July 18, 2016 I went on a field trip to Principal Financial, and a Science Center. On Tuesday, July 21, 2016 I attended a luncheon lecture with Dr. Daniel Spikes. As the title of my post states I have seven points to make:

1. When you are on a field trip to Principal Financial be prepared to greet security at a front desk to be checked in.
2. When you are on a field trip to Principal Financial be prepared to absorb lots of information. You may not be able to ask many questions, but you will definitely receive feedback from every representative there so you are well-informed.
3. When you are on a field trip then you **MUST** go to Cafe Baratta. Initially, I thought this restaurant was going to offer a open roof dining experience, but I could look out the windows they had onto the sub roof which was close to being what I wanted. They have very delicious Red Velvet cake, and Cream Soda as seen below:



4. When you are on a field trip and are dining at Cafe Baratta you will have friends who want to eat your food and will ask

persistently. Nevertheless, the food is really great so you MUST stand your ground with a deep manly voice and say: "This is mine!" Or "I'ma eat that!" Either will do the job in this case get the point across that you mean business when it comes to this Cafe Baratta food. (P.S. IF you do this well enough you may surprise someone who has a deeper voice than you!)

5. When you are on a field trip to the Science Center be ready for endless children who will be there to enjoy learning about science. There will be many activities such as interactive play with exhibits designed to teach you principles about science. You may even meet some animals like snakes, turtles, and turtle shells as seen below:















6. When you attend a Luncheon Lecture with Dr. Daniel Spikes prepare to be engaged with very sensitive topics of race which fuel the discussion. Understand that you will learn a lot of great information from him as he is very passionate about this topic.
7. Finally, when you attend a Luncheon Lecture with Dr. Daniel Spikes, and you have a member like Stanley he will ask the following question: "This was great and all, but can we go get lunch now?"

Stay up on this "7 things from experience" kind of information folks as there is more to come.

Sincerely,

Brian D. Hanson, Jr.

Rebound and Stand your Ground

Posted on [July 18, 2016](#) by [bhanson1](#) July 18, 2016

Dear SPIRE-EIT Blog,

I have realized that it is very important to make sure you “stick to what you believe”. For example, our research task for the ITS has been shutdown by the DoD because they believed that our task was not conducive to what they envisioned it be as. With that being said there is dilemma in being left to rebound from this major blow that was completely unexpected. As I sit here and write this post I am reminded that I actually had two other posts before this one that I needed to complete which I have chosen to include in this current one. Some may say that my decision to do this is incorrect, but I believe that after the time my group and I have spent towards our task to only have it not reach its full fruition all I can say is that I believe in priorities. My priorities are for me and me alone which does not become influenced by others and skepticism on this subjective matter. I look to my left and right to see my teammates working hard in striving towards what they believe is right. Well I look at myself and see the same thing, but I do not receive the same compassion that they do. Fortunately, I do not allow things like this to frustrate me as a distraction from being “future focused”.

Speaking of being future focused, I attended a public dissertation defense for the now Dr. Euijing Yang today. Although I have the task of finishing my Journal Club presentation for my group, I knew that attending something as monumental as a defense was the right kind motivation and inspiration I needed. Dr. Yang’s defense was a sight to behold as I had no idea what to expect in context of how the experience would have been. As I sat in the office chair of the conference room I felt like I was apart of a great moment in the history of Human Computer Interaction. I took notes on every slide she presented as I wanted to know what kind of things I should my own dissertation defense actually have when that time comes. I really feel like attending this event was such an excellent experience for my development along the path towards pursuing a PhD. This definitely made the prior situation with our task being rejected become less of an overwhelming event as now my group and I can focus on the future for better hopes of changing the world in Human Computer Interaction.

Sincerely,

Brian D. Hanson, Jr.

Blessings keep falling in my lap. lol

Posted on [July 11, 2016](#) by [bhanson1](#) July 11, 2016

Dear SPIRE-EIT Blog,

I am very excited from this past weekend because my one of my roommates from UMBC who is an avid cyclist found an awesome deal on Craigslist for me to purchase a brand new road bike that was released this year! The bike has upgraded components and comes with a different maintenance parts which is a shocking suprise. Usually, these kinds of deals on Craigslist or any similar service are very rare to come by. The bike itself looks like this:



From being here in Iowa and riding the Raleigh Record road bike I feel even more enthusiastic about cycling to the point I really desire to develop my experience and train with my roommate. We both have already been on cycling rides during my freshman year so now as a rising sophomore and with the quality of this bicycle I know I will be able to ride for many years to come. I have numerous cycling jerseys which I will now have to wear when I go out on serious rides to endure the elements of weather and exhaustion of my body.

Regarding my research I am currently still working on my Intelligent Tutoring System (ITS) section. In addition, my PI wants a paper model or rapid prototype how our task simulation will possibly be designed to function. We have our own desk space now that our PI

allocated for us to construct and run tests of it. Right now I am in my graduate mentor meeting with Anna and we discussed more details about how we plan to simulate our paper model. Later today I will be working more on consolidating instructions for the paper model.

Sincerely,

Brian D. Hanson, Jr.

What is today? I do not even know.. Lol

Posted on [July 7, 2016](#) by [bhanson1](#) July 7, 2016

Dear SPIRE-EIT Blog,

Today is Thursday, July 7, 2016 and I do not feel as though anything is different about today than any other. Not because I am bored but mainly because I have become accustomed to the routine that takes place here at VRAC. Nevertheless, I have been making strides in my recovery with my thumb and back from the bike accident. I have been constantly icing my thumb which I am about to go do right now. (Goes to refrigerator and retrieves ice pack) Sorry for the interruption, and thanks for waiting.

(Now that I have this) I can talk about how I am in a dilemma with deciding what kind of Apple MacBook Pro I actually want to purchase. So I have been talking to Paul Easker about lots of Apple products and speculation of the next generation of their products that should be released soon. As a college student I can receive a discount on the MacBook Pro, and apparently the Pro overall is a better performance computer than the MacBook Air. So I am trying to decide on what is the most important between performance and portability for me. I do not think I will be able to figure this out today and I may ride my bike down to Best Buy to see if they have any of these devices on display. I really wish there was an option that did not compromise on both of these features.

Sincerely,

Brian D. Hanson, Jr.

Hard work has paid off!

Posted on [July 6, 2016](#) by [bhanson1](#) July 6, 2016

Dear SPIRE-EIT Blog,

Today we had our official meeting with our client at ARL and I bet you can tell by the title that it went well. Actually, it went more than well... It was great! So Stephen started the meeting off with reviewing information that he discussed previously which transitioned to our presentation. I began our presentation with introducing myself and then my teammates followed. We went through our presentation pretty swiftly and we clarified many points that our client initially had with our older slides that were given to her a week ago. We implemented in our presentation today several visualization techniques such as animations of images and role playing of simulation scenarios to aid in conveying how our task would actually function for the participants of the study. These were great additions to our presentation which received lots of positive feedback towards the end our presentation when we opened the discussion for questions. Stephen and Anna informed us that we really did very well with our presentation and our client really found it all to very conducive towards what their expectations were in how the task should actually be designed.

After our main meeting I had my deeper dive presentation which went okay. Mainly, because I did not get the chance to design my own object to print because of my thumb injury from a bike accident over the weekend. Regarding my bike accident the bike I was using ended up getting deformed in the front wheel which needed to be replaced. I went to the Skunk River Cycles bike shop (which is where I have always gone ever since I have been here in Ames) and after explaining to one of the technicians about my bike accident they were extremely kind to replace my front tire for FREE. This was such a blessing that I am very grateful for. So much that I am going to probably end up getting the road bike I have been using here shipped back home if Stephen lets me (fingers crossed).

Sincerely,

Brian D. Hanson, Jr.

It's Late and It's Been A Long Day.

Posted on [July 5, 2016](#) by [bhanson1](#) July 5, 2016

Dear SPIRE-EIT Blog,

Today I worked endlessly with my group to complete our presentation for our client at ARL. The time right now as I am typing this sentence is 11:54 PM and I am still at the VRAC. Although I am pretty tired and somewhat injured from a bike accident over the 4th of July weekend I still am glad that we put in so much work today. Honestly, I do not have much else to say that look for my blog post tomorrow as an update to this one on how our official presentation actually goes! Good night lol.

Sincerely,

Brian D. Hanson, Jr.

Technology & Decisions

Posted on [July 1, 2016](#) by [bhanson1](#) July 1, 2016

Dear SPIRE-EIT Blog,

Today when I got into the office I had an excellent conversation with Paul Easker, an IT Specialist, here at VRAC. I was trying to get an application on my computer to work with my iPad to have a dual screen setup for an extended display. We worked through all of the kinks of to diagnose what the problem was and we discovered that it was my actual computer that was not functioning with my iPad. I made several jokes with him exaggerating my disappointment for this application not working on my computer, but then he showed me how it would work on his MacBook Pro. Surprisingly, it worked perfectly and I felt inclined to complete my collection of Apple devices. Especially since, Apple really has perfected the interaction of intertwining each of their devices from different platform to work with their other devices. Currently, I am trying to decide whether I should invest in a MacBook but I am not really sure about what kind MacBook I would actually purchase. Fortunately, Paul was kind enough to let me borrow a top model of an older MacBook Air he had to play around with all of the features that I could expect from any of the MacBook devices. Therefore, this 4th of July weekend I will be constantly messing with this computer to explore everything it has to offer. I hope that I can eventually make the right decision lol.

Sincerely,

Brian D. Hanson, Jr.

a.k.a. "Gadget Guy"

Starting early Today has never felt so great!

Posted on [July 1, 2016](#) by [bhanson1](#) July 1, 2016

Dear SPIRE-EIT Blog,

===== Morning Update Post =====

Today is Thursday, June 30, 2016 and I got to work today around 7:44 AM. No one except a few of the staff of VRAC where here at this time. This morning I woke up very early to finish a presentation for my PI and I believe the extra sleep I got last night made it easier to travel to work this morning. I had my usual breakfast of Quaker peach oatmeal which is still surprisingly good with just using water as I have always used milk for this kind of oatmeal.

Today is a big day for my research group as we have a meeting with our client. I believe we have finally "learned the ropes" of this research process between multiple PIs. Which was initially challenging with trying to meet everyone's expectations. We hope that everything will go pretty well and I will update this post later with that info!

===== Still the Morning Update Post =====

The current time is 9:40 AM, my PI informed my team that our client unfortunately, is sick so we will not have the meeting with her specifically. Nevertheless, we will still have a meeting with our PI to further discuss how we continue to make progress on completing the presentation. That's all for now!

===== Afternoon Update Post =====

Although it is 12:11 of the next day there was an interesting experience that occurred today. First, this morning I had a luncheon lecture with Dr. Young A. Lee which discussed the progression of fashion and HCI technology. The timeframe that luncheon lecture

usually takes is from 11 AM till 12 PM which leaves from 12 PM to 1 PM as a time to enjoy the actual lunch. On the contrary today, Dr. Lee went over 30 minutes which was challenging to deal with. As I look around the room many of my peers felt the same and this made the time when we were able to go eat so much of a blessing lol. We were saved by the food. Moreover, my teams meeting with our larger team had some great critiques however, I still conveyed we has the REU team needed assistance with development of our team task definition. Mainly this is because our task has so many scenarios which act at approaches to the problem and in a sense we need to account for every single one which is a very challenge task in itself. Even more so, account for them all does not even gurantee that we are able to measure the components of teamwork. Nevertheless, our PI said we did a great job and now we have a new action plan for moving forward. I understand more about research in the sense that I will have many struggles like this but enduring them and exercising my due diligence is the best way I can practice becoming a future researcher.

Sincerely,

Brian D. Hanson, Jr.

Progress, Progress, Progress...

Posted on [June 29, 2016](#) by [bhanson1](#) June 29, 2016

Dear SPIRE-EIT Blog,

As I write my blog today I am feeling great about being able to track my time with doing this task. In a sense I feel that I am more motivated by having a system of time management in place that is not completely constrained. With Tyme 2 I feel more free or even blissful to just use my time as I would normally but I can monitor it all. I even was introduced to another app that I could use but I would need to create a pro/con chart to better understand how it compares to Tyme 2. A minor feature that Tyme 2 has that I believe will make it a better choice is the note taking you can do when a task is started or completed. Currently, I am only using the completed option to document my progress on a task or state whether a task is completed in full.

Moreover, today I spent some time today with David McKnight thinking about how we should construct the constraints for our task. We made some progress with the Gunner role of our task with aid of one of the teachers who is participating in the REU program this summer. Interestingly, I am learning more about the military with a focus on the army from working on this part of our research project. Also, I am looking forward to playing some video games that simulate what we are trying to develop to get a more immersive understanding of how this military experience actually is.

Sincerely,

Brian D. Hanson, Jr.

Trying something new...

Posted on [June 28, 2016](#) by [bhanson1](#) June 28, 2016

Dear SPIRE-EIT Blog,

Today I am trying something new with blogging and keeping track of my time. My MCA Deeper Dive teacher, Alex Renner introduced me to an application called Tyme 2 which he uses to track how he is using his time to for his many projects. I have been searching for an application that would be similar to this for quite some time. Originally, I was using an application called Hours which has similar functionality but may end up costing more than a one-time payment.

Currently, I am using the app right now to track my time with completing this blog. Interestingly based on the way the app is designed, it makes an interesting twist on the hierarchical break down. I can start out with categories that can group projects which consist of single tasks. These tasks are used as a medium for tracking the time of each project. I am still learning how I can use this hierarchal structure to organize my schedule of SPIRE-EIT.

My main hope in using this application is to provide a comprehensive PDF export of how I have spent my time during the course of the fall semester. Previously my main way of scheduling how I completed tasks was via blocks of time in a calendar which made me feel pressured to complete my respective task during that allotted time frame. I feel that this way of tracking time is more free form as I can improve how I spend my time as I continue to use the app.

Besides trying this new way of time management I am working on adding my sources from the journals I have read to my team's literature review table. I have been trying to learn how to format each reference based on the APA format which is a requirement for all of the references of any literature review table. Moreover, I am very glad that I have been introduced to this method of organizing

the research of journal articles because this serves as a reference for other members of your team who can read what you extrapolated from your articles/journals.

I feel really great that I have started my blog on time this time around because I was practicing a bad habit last week with not posting anything at all. Nevertheless, I am now looking forward to documenting in my blog about my progress that I make with my time management as I prepare to return to UMBC improved in my skills that needed some improvement.

Sincerely,

Brian D. Hanson, Jr.

An Apologetic Return to Blogging

Posted on [June 27, 2016](#) by [bhanson1](#) June 27, 2016

Dear SPIRE-EIT Blog,

This is my preface to this blog. So I know world that I have been offline for a while... The only explanation I have is to say that I actually did not find anything to blog about on the days that I didn't. But it is okay for sure so from now on I will be more consistent in my blogs especially with my deeper-dive topic being 3D Printing!!

So far I have had 3 session with Alex Renner who can be considered as the 3D Printing Guru here at VRAC. What is very interesting about 3D printing is that it is actually a subset of Additive Manufacturing (AM) which is the process of joining materials to make objects from 3D model data, usually layer upon layer, as opposed to subtractive manufacturing methodologies. Currently, I am very interested in nanofabrication which actually applies to AM in the sense that you can use the principles of AM to improve the processes of nanofabrication. There was a lot of information that Alex went over in his session and interestingly I was very intrigued in my intellectual curiosity about what he presented.

Sincerely,

Brian D. Hanson, Jr.

Two Blog Posts in 1...

Posted on [June 17, 2016](#) by [bhanson1](#) June 17, 2016

Dear SPIRE-EIT Blog,

I have been trying to keep up with my blogs but now I have to merge two blogs into one. So far there have mainly been just instructional courses in Maya and Solidworks which are great programs for 3D visualization. So far I find 3D visualization to be very interesting as there are many applications that make it applicable in a variety of fields.

Besides course instruction, my research group had a team meeting yesterday which was an eye opening experience for me as an future researcher. The most important thing that was emphasized in the meeting can be described as a question: **"Where are your references???"**

After experiencing this kind of critique I really am very precautious of how I propose ideas in research.

Here's Why You Should Do 3D Modeling, Eat Delicious Food, & Seek Great Support.

Posted on [June 15, 2016](#) by [bhanson1](#) June 15, 2016

Dear SPIRE-EIT Blog,

As the title suggests I have some great insight to provide on three events that took place today which make this program so great. Firstly, today marked the first session of our Maya Course Instruction. Maya is a 3D Modeling program by Autodesk that we were learning how to operate to develop a 3D model of a backyard scene in a rural environment. I never heard of Maya before but I have used Autodesk's Inventor CAD program before so the transition from this software to Maya was not as challenging. Very few of us actually had experience with 3D modeling and we all breezed through the tutorial we were given to learn the functionality of Maya. Fortunately, 3D modeling has many applications in aiding in 3D visualization which is the technology that engineers and the gaming industry uses. An even more interesting application of this software is that you can use the scenes you develop in Maya and transfer

them to an STL file to be 3D printed. For example, with 3D printing there are many objects that can be created such as some the objects below:

Cool Things to 3D Print #16: **Articulated Lamp**



Cool Things to 3D Print #2: **iPhone 6S Charging Dock & Passive Amplifier**



Cool Things to 3D Print #26: **Car Windshield Ice Scraper**



Cool Things to 3D Print #14: **Soap Dish**



Cool Things to 3D Print #24: **Self-Watering Planter**



Cool Things to 3D Print #17: **Shower Head**



I am very interested in the possibilities that 3D printing has to offer and how it can be incorporated in our daily lives as utilities for commonly used items and gadgets.

Ever since I have come to Iowa State University I have truly been impressed with the UDCC's food quality that is available selection at lunch time. I have had delicious steak, signature macaroni & cheese, stir fry rice with succulent chicken, and gargantuan BYO subs. Compared to food that I have had at my respective school I really have enjoyed what has been offered here.

Another great aspect of this program is the generous and genuine support the staff provides to the REU interns. Although it may not seem likely much I was in need of a projector to host a movie night for my fellow REU interns. I went to Paul Easker who is the IT

Specialist here at the VRAC and he did not hesitate in providing what I needed. I have even been able to ask for other peripherals that I usually would have had to pay for on my own.

Sincerely,

Brian D. Hanson, Jr.

The Story Of Birthdays, Work, & Project Development Has Just Gone Viral!

Posted on [June 12, 2016](#) by [bhanson1](#) June 12, 2016

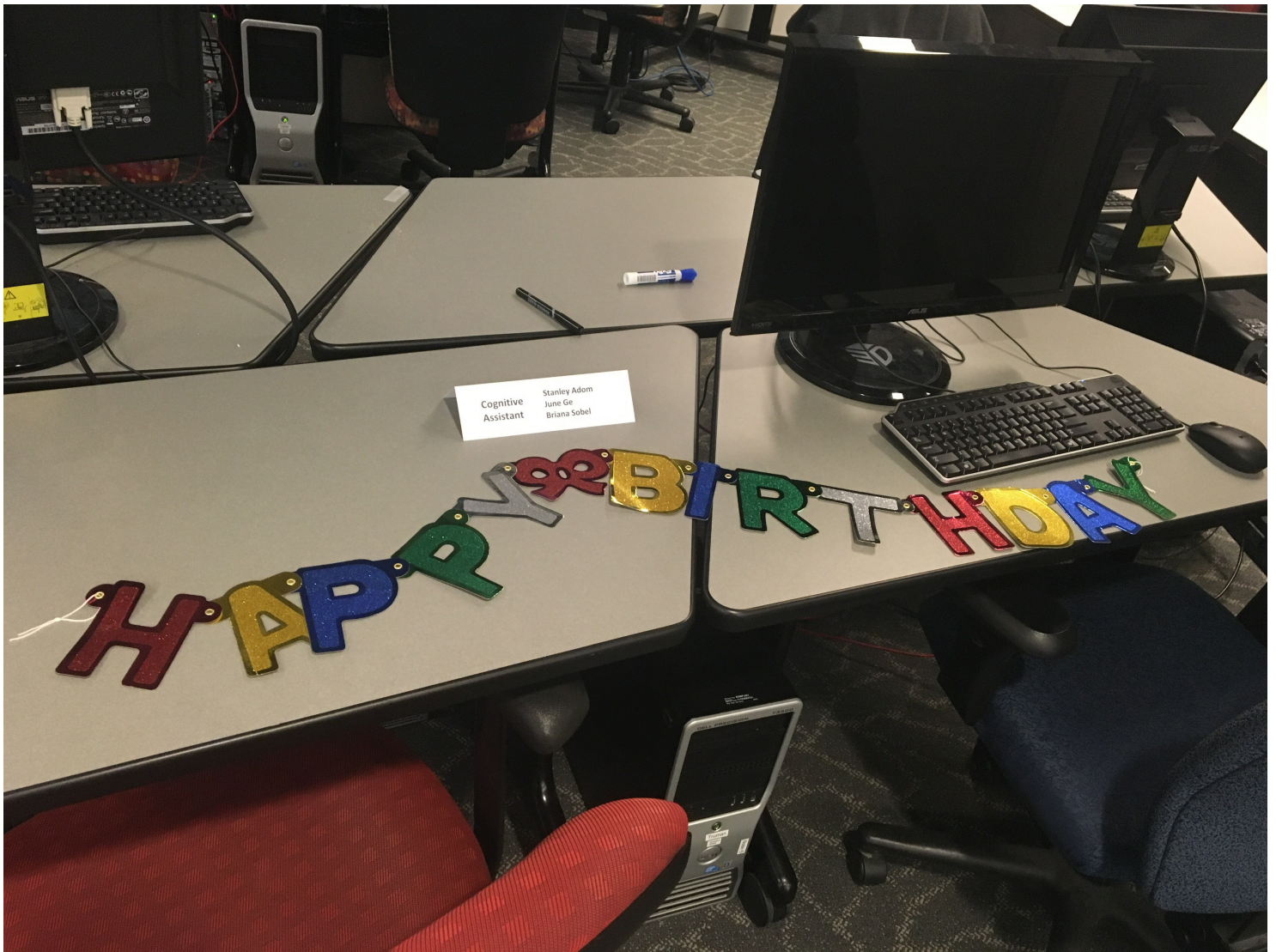
Dear SPIRE-EIT Blog,

Today is the 5th day of blogging and there are many updates for SPIRE-EIT that you should be aware of! On Friday, June 10, 2016 was June Ge's birthday and Sunday June 11, 2016 is Stanley Adom's birthday. Who would have thought that our cohort would have had two interns whose birthdays were in such close proximity? Their birthdays were celebrated in the office today which was a very awesome feeling to see how this environment is not only a place for work. June was presented with a birthday banner, and Stanley had a birthday triangle banner taped to his computer screen which was a kind-hearted surprise for them to receive. I hope that future interns celebrate their cohort members as this will help to kindle a supportive dynamic that will aid later down the road. I feel that with my cohort here at SPIRE-EIT we are close because of the decisions we have made to spend time with each other. Reflecting on the first two hours of coming to Iowa everyone was initially acting awkward but from the pool of people that was selected we had many people who reached out to others to include them in conversations and activities.

Stanley's Computer:



June's Birthday banner:



Besides the birthdays we had during this weekend Friday marked the final sessions of the C++ Course Instruction. This week of C++ was challenging in a good way and I greatly appreciated the graduate students' patience and genuine desire to clarify any concerns I had. I had a bit of trouble remembering the syntax for C++ which made it completing some of the tasks we were assigned a struggle. Nevertheless, I pushed through that discomfort of learning and was able to complete the majority of the assignment. All of this instruction will come more into play when I take on the "deeper dive topics" which will be in the upcoming weeks. Other than that we are now done with C++ and will be moving on to Maya which is a 3D modeling program that I believe will benefit my project. I hope that Maya's learning curve will not be too steep however, I have experience in 3D modeling with Autodesk CAD Inventor from high school.

As for my ITS project today I had another meeting with my graduate student mentor which we discussed and answered the requirements we were going to implement for our team tutor. We still have some brainstorming to complete as we weren't able to answer everything specifically. We have a problem paragraph that will be due on the next Friday which will inform our larger team of the problem we plan to answer exactly in the design of our team tutor. I believe this writing assignment is a component of the publication that we are planning to create by the end of this program which is such an awesome feat to accomplish as a rising sophomore. I look forward to the future tasks we have to complete with this project and I hope that my team and I are able to release our very own publication.

Sincerely,

Brian D. Hanson, Jr.

4th Day of Blogging

Posted on [June 8, 2016](#) by [bhanson1](#) June 8, 2016

Dear SPIRE-EIT Blog,

Today consisted of having a C++ Course Instruction in the topics of Control Structures such as "If" Statements, Switch Statements, Loops such as: While, Do-While, and For Loop. These control structures I was already familiar with from a C++ Course I took at my school however, it was felt very good being able to review over these topics. I received clarity on any vague skills or syntax that I needed when we went over these topics. Additional topics we went over in a later session were Functions, Scope, and File I/O. Interestingly, I never learned about File I/O in my C++ Course and it was very different in my experience in learning File I/O in Python.

Moreover, I attended a meeting today with Dr. Stephen Gilbert, Dr. Eliot Winer, and the whole Intelligent Tutoring System (ITS) Team to discuss the progression made thus far with their customer from the Department of Defense. It was very intense and pleasing to witness how everyone communicated with the customer. Initially, I thought there would have been a bit of tension between everyone as there have been a few delays in this project based on the "exponential complexity". What I mean by "exponential complexity" is that through what appear as simple additions in the task load of the ITS the difficulty of programming the tutor grew exponentially. For example, the scenario taking place with the tutor is reconnaissance and this is all simulated. There are many variables of this scenario setup through which make this task for the tutor become complex. Some variables are number the number of individuals who will participate on the team, the task complexity itself whether it is a simple task that all the participants can do together or if it requires more "cognitive load" in order to be successfully completed. Generally, with this being a focus on a team task communication between the participants is required and this component was challenging to monitor and analyze with the data that they were getting from other variables that had to be monitored. The main challenge of this ITS is the software being used in this iteration to develop it which has not been very user friendly for the graduate students of this team.

One part of this meeting that made me feel very great was when Dr. Stephen Gilbert introduced us to the customer. My REU team consists of David McKnight, Oghenekaro Durojaiye, and myself. We are responsible for creating the 2.0 version of this tutoring system which will incorporate a different platform that should be much better in alleviating certain programming issues the main team was having. I am really looking forward to when we begin to work on this tutor and as we have a foundation to work from and I believe things can only get better from this point on!

Sincerely,

Brian D. Hanson, Jr.

For my blog post today, I got something to say...

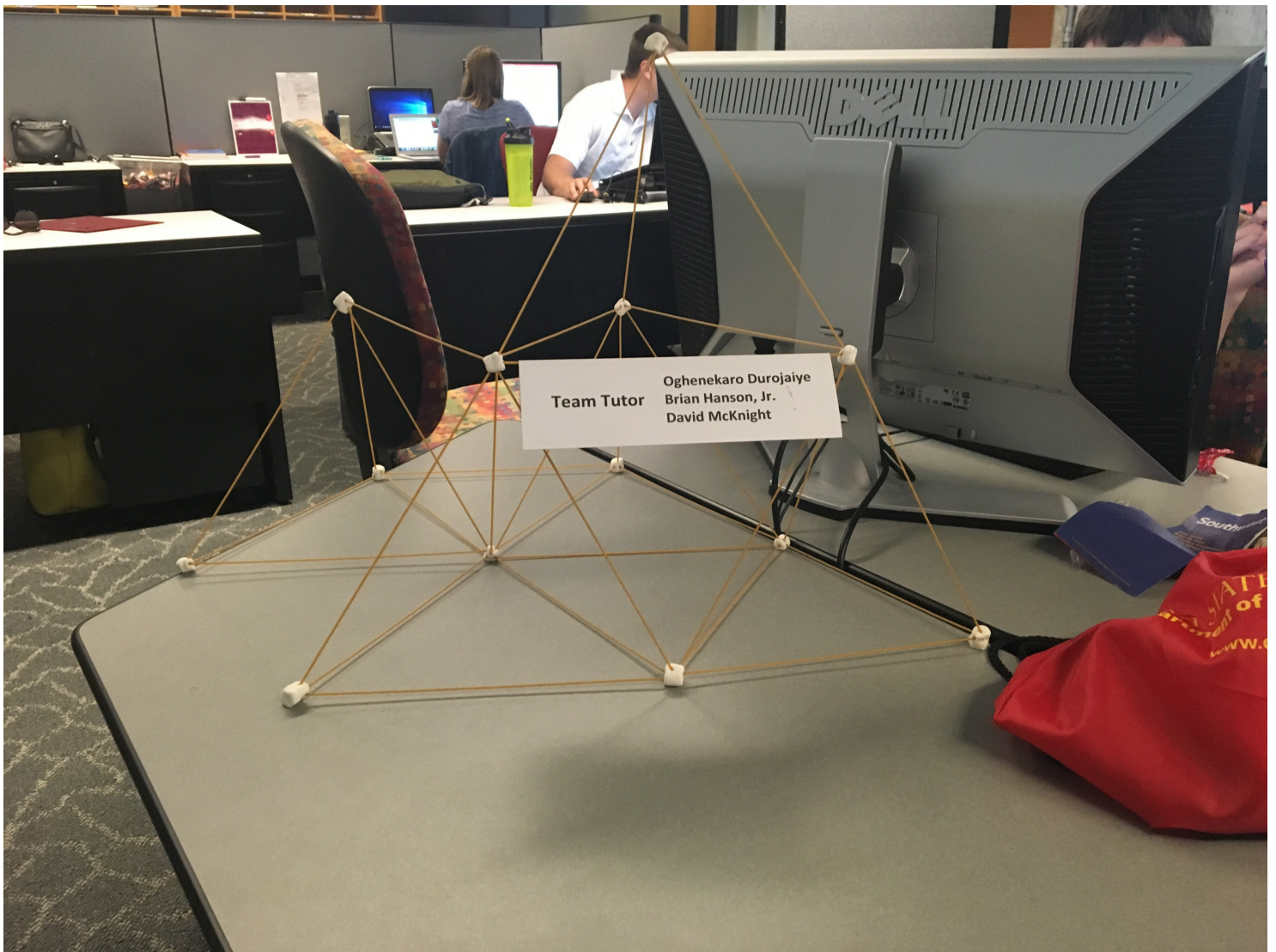
Posted on [June 7, 2016](#) by [bhanson1](#) June 7, 2016

Dear SPIRE-EIT Blog,

Today I want to reflect on what things I have learned about this program and the history it is trying to create. Dr. Eliot Winer and Dr. Stephen Gilbert are genuine in the perspective that they truly care about advancing the field of STEM to be freely open to everyone. Today I learned that ISU's Jack Trice Stadium has an unfortunate racist history which reminded me about how the field of STEM is in dire need of diversity to accommodate an effective transition towards equal prominence for all researchers of all backgrounds. I am very grateful to be here at the SPIRE-EIT and I encourage any and everyone who are inquisitive of what research entails and how they can also be able to contribute to apply.

Moreover, today is the third day of blogging and I was able to meet the team who has been working on the Intelligent Tutoring System. As a REU member of this team, my fellow team members and I met graduate and masters students who have been working and discussing updates in technology that could be applicable to the Intelligent Tutoring System Project. Surprisingly, video games were a great topic of discussion as there have been many strides and gains made in this field towards simulation development. We apparently could use this to better produce visualization for the people who would be using this tutor.

On another note, I have been meaning to post a picture of the marshmallow and spaghetti stick sculpture my team made which reminds me of a tetrahedron!



I have another meeting coming up to further discuss more about the articles that I have been reading to better understand what has been developing and taking place in the field of ITS! So far the workload has not been very challenging but I know this is only the beginning of it all and I am ready for it. There are some fun activities planned for later on this week at the State Gym and interestingly there are a few birthdays for my fellow REU interns coming up.

Day 2 of Blogging

Posted on [June 6, 2016](#) by [bhanson1](#) June 6, 2016

Dear SPIRE-EIT Blog,

Today was the very first day of instruction for our courses. From 9-11 AM we learned about the basics of C++ which was very familiar as I have taken a C++ course at my college. Our teachers for this course are graduate students here at ISU and although most of us were not as challenged with the beginning level skills of C++ they challenged us with more advanced tasks.

Dr. Eliot Winer introduced how our schedule for courses would work and how they would lead to the “deep dive”. The deep dive is when the REU participants have the opportunity to choose which of the provided topics they would like to focus more on. The topics I have to choose from are General Processing Graphical Units (GPGUs), 3D Printing, and Unity implementation for either the C6, virtual reality, or application development. Although it is only week 2 I am more interested currently in the Unity deep dive because there is potential to develop an application that could be published to different outlets like the Apple App Store or something similar. I have experience with iOS app development from a course that was offered at my college and I really enjoyed developing those apps.

In addition, I met two teachers who are interested in bringing Humana Computer Interaction (HCI) into their classrooms. One is an AP

Computer Science teacher and the other is an 8th grade Biology teacher. I really am finding that the HCI field is a very great fit for me as it has shown me what it means to incorporate people from different backgrounds to make this an interdisciplinary experience.

Sincerely,

Brian D. Hanson, Jr.

Today Is More than a Great Day!

Posted on [June 3, 2016](#) by [bhanson1](#) June 3, 2016

Dear SPIRE-EIT Blog,

My name is Brian D. Hanson, Jr. and today marks the fourth day that I have been at the SPIRE-EIT REU here at Iowa State. I have met twelve other great interns who all make me feel great for being here this summer. So far I have dwelled a little into my actual research project which consists of Intelligent Tutoring Systems. This project is funded by the Department of Defense which is excellent to see that this kind of project is being offered to undergraduate students.

I have had several sessions going over what expectations I have for this summer and I hope they will be fulfilled. Here in Iowa I am greatly enjoying the "Western Hospitality" from the bus drivers on CyRide to Passengers at the bus stops and local drivers of Ames. I live in the Freddy Court Apartments with the rest of the interns and so far the living accomindaitons have been amazing. I am very grateful for what this program has been able to offer me and it has made this experience even more worth-while.

My project leader Dr. Stephen Gilbert has intrigued my intellectual curiosity on the subject of intelligent team tutoring and what kinds of systems can be designed to teach groups how to work better as a team. This project was designed to span over the course of three years and fortunately this summer is the third year of the project. Therefore, if all can go according to plan I will hope to create a publication from this research experience to enhance my CV for graduate school. Fortunately, my graduate mentor Anna Slavina is also interested in accomplishing this feat so I look forward to working with her on that and my group.

I am very excited that week 1 is coming to an end and that week 2 is steadily approaching as hopefully I will be able to have bicycle from one of my Cross REU mentors that I could use to commute to the VRAC building. I am a very avid cyclist and I have never seen so many other people cycle and commute via cycling as I have here in Iowa. In some retrospect to what I have experienced back at UMBC I feel warmly welcomed here as a research intern of Iowa State University's VRAC SPIRE-EIT REU for 2016.

Sincerely,

Brian D. Hanson, Jr.