Wisdom Akpan

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Blog #32 Insert Creative Title Here

Posted on July 28, 2016 by aakpanJuly 28, 2016

I don't really have time to blog anymore, but I think I'll take it as a sign I'm working hard and making progress on the project

Blog #31 Oh Yeah

Posted on July 25, 2016 by aakpanJuly 25, 2016

I'm not going to lie I'm pretty excited to have this presentation business behind us. It was pretty stressful and felt like it came out of no where. At the same time I'm definitely glad we had to participate for a couple of reasons. For starters it was nice seeing the projects of other REU students and it was motivating seeing folks my age do things as cool and cooler then the stuff we're working on. Those kind of experiences are kind of necessary to keep ego in check. The other great benefit of all this presentation business is that in order to prep we had to really consolidate and rethink what we've actually accomplished and I think it will not



only help with our final presentation but with figuring out what finalizing steps to pursue for then next two weeks.

Blog #30 Stephen's Mom

Posted on July 22, 2016 by aakpanJuly 22, 2016

Polly Gilbert is legit what I would expect the woman who raised Dr. Gilbert to look, act, and feel like. I also found the info we got from both her and Jake (from State Farm) to be really helpful. While I'm not looking forward to having to take the GRE I think I'm gonna have a leg up on the competition when I do. Although all things considered it's super unfortunate that we didn't get to hit the lab today, all of these meetings while helpful are also pretty constant obstructions to our progress at least regarding our lab stuff.

Blog #29 Lol Meetings

Posted on July 20, 2016 by aakpanJuly 20, 2016

Angelica did her best to put the pressure on us for these presentations to the USC REU program. I understand why this whole thing is big deal but I'm not shaken up or anything. In fact I would say that I'm pretty excited to show off all of our baller work. However I find it kind of annoying how much time we've had to spend on preparing to display our research relative to how much time we've actually gotten to spend on researching. In the grand scheme of everything the presentation tutorials are necessary especially considering that I don't have a lot of experience with any of this. But at the same time I can guarantee that if we didn't have a meeting everyday for one thing or another then we'd be significantly further on our project.

Blog #28 Talks on Diversity

Posted on July 19, 2016 by aakpanJuly 19, 2016

Dr. Daniel Spike was the host of today's luncheon lecture and I must say it was a really great one. He brought to

light the ways that institutional oppression effects success of marginalized groups in education. I think it was pretty powerful especially the clarity and authority with which he was able to explain the more complex and controversial aspects of our expectations of academia. I also found the little he told us about graduate school to be really useful. One interesting realization his talk provoked was the importance of role models and mentors. It'll be interesting to have to consider something like that as I search for a place to research after my undergrad.

Blog #27 Digressions

Posted on July 15, 2016 by aakpanJuly 15, 2016

So I was late to for the bus despite waking up on time and find myself almost thinking about chasing it. But that would've probably required me running barefoot since sandals are super hard to sprint in. Anyways I was walking to the VRAC and for some reason thought it was a good idea to cut through Gilman in order to get their. Anyways I realized I was lost despite having worked in this building at least 3 days weekly for the past 7 or so weeks. As I was wandering through my labyrinth, what I would imagine was a new cleaning lady came and asked me about the closest exit that didn't involve stairs was. I tried helping her find it for like 4 minutes to no avail so she sighed exasperatedly and decided to take the trash cans nest to her down the stairs. I offered to help but she refused in that kind of ambiguous passive aggressive ways that makes you just want to leave. So I did. I finally found my way out of the building and discovered what was probably the ugliest student garden ever. It was just a pile of dirt with different labels for each plant but each plant had the same indistinguishable shade of sickly brown. I spent the rest of my walk to VRAC pitying the gardeners who made that.

Blog #26 Reflections on Smores

Posted on July 14, 2016 by aakpanJuly 14, 2016

Yesterday me and my boys Stan and Carver were hanging out at the Freddy Court smore's student event. It was a low key and pleasant experience and it gave me my first time using a Reeses's Peanut Butter cup in place of regular chocolate on my smores. While roasting marshmallows and each other, we were talking about plans for grad school and afterwards. As we were talking I realized something, This program's actually helped me start sorting out the deeper details of my post undergrad plans. I know that was one of the goals that Steven and Elliot stated for the program but colored me impressed for the process starting so soon.

Blog #25 Sisyphus's Lab

Posted on July 13, 2016 by aakpanJuly 13, 2016

So we've been hitting up the lab relatively frequently this week and it's been great for making strides towards ironing all the kinks in our final product. But at the same time there's this Tom&Jerry-esque experience surrounding us where it feels as though for every problem we iron out another one pops up next to it. The whole thing feels a little bit Sisyphean unless you take a step back and realize that I wouldn't even know if problems existed or what questions to ask less than two months ago. When you look at the big picture it's a little bit easier to appreciate the scope of the problem we're trying to fix and how our little accomplishments this summer can contribute to solving the problem.

Blog #24 Dungeons and Doctorates

Posted on July 12, 2016 by aakpanJuly 12, 2016

Whenever anyone mentions the master-apprentice element of grad school I get this medieval picture of a sagely and bearded wizard besides a youthful and pluck apprentice. I think this association is probably influenced by the fact that the HCI grad school population is probably more likely than the general population to have played dungeons and dragons before. Of course that's neither here nor there. Stephen's talk on his research was pretty fascinating but the

real joy there was hearing him recount his researching experiences in industry and academia. I think it's really important to here other peoples stories about their struggles with getting into grad school. That kind of experience sharing really humanizes the whole process and makes everything look and feel more doable.

Blog #23 Getting Etiquette

Posted on July 11, 2016 by aakpanJuly 11, 2016

This whole weekend was pretty eventful. I think it'll go down as in my memory as a legendarily pleasant experience mostly due to the epic milkshake I had at Zombie burger. Cake Shakes are where it's at but if I hadn't been with such chill folk the 30 minute wait before hand would really have sullied my enjoyment. But really if someone had told me six weeks ago that I would enjoy the presence of people I've only known for six weeks so immensely I probably would have asked you for your sources. Anyways this afternoon we went to a lunch event where we practiced eating with good manners and I was surprised at how many of the rules mentioned were things that I already knew. It kind of highlights how pathetically bad I am at displaying proper etiquette when I realize that most of the time I'm ignoring the rules as opposed to simply not knowing them.

Blog #22 The Mundane

Posted on July 8, 2016 by aakpanJuly 8, 2016

It's pretty gutting to look at the date and realize that only four more weeks of this program are left. I try not to start missing people while they're still in front of me but for some reason being reminded of that is really sobering to me. I think the reason why I'm enjoying myself so much right now is the folks around me. My cohort, instructors, and the rest of the community is so fun, quirky, and supportive. In an environment like that even mundane things can be a ton of fun to work on. Anyways it's worth reiterating that it feels good to look around and finally start being able to see all sorts of progress being made on the project. We should be on track to finish hammering everything out if we can get into the lab more next week now that we don't really have many classes.

Blog #21 The Light at the end of the Tunnel

Posted on July 7, 2016 by aakpanJuly 7, 2016

I'm not gonna lie I'm in a pretty good mood. I owe a good chunk of that to the fact that I no longer have to think about my deeper dive and the associated tasks with that. With the presentation out of the way we can now orient ourselves completely towards our research project the thing that we came here to do. It's also really cool to start to seeing the light at the end of the tunnel with regards to our project. Now that Doc Claussen is back from his conference and Nate's back from vacation we can start looking towards incorporating all of our ideas into something wearable and testable. The hilarious thing is that if we get far enough to make a wearable product by the end of the summer then we won't be able to test it on people since we didn't do our IRB app.

Blog #20 Learning to Teach

Posted on July 6, 2016 by aakpanJuly 6, 2016

Today's the day we do our swanky presentations for the Deeper dives and while I feel like I've learned a lot I don't really feel like I have a mastery of all of Additive Manufacturing. in fact between my interactions with the mentors and professors I've come to the conclusion that I've been going about this whole idea of expertise wrong. The expert on a topic isn't the person who has the most answers but the one whose asked the most questions and is least confused by said questions. I attribute this to the fact that for every question answered a researcher will find at least four more inquiries pop up. It's a rough lesson to learn but knowledge is an infinitely expanding entity and I take solace in being able to expand the pool of people interested in this stuff.

Blog # 19 Clothes

Posted on June 30, 2016 by aakpanJune 30, 2016

Dr. A Young Lee's talk on her research managed to tie together everything I like about Chemistry, Biosensors, and 3D Printing with the one industry I'm probably most apathetic about. That's not say I care about fashion or clothes now, but rather now I have an even greater appreciation for the variety of applications that our work this summer might have. The whole conversation had made me wish that we had more than a measly 10 weeks to actually push the boundaries of these fields. At the rate we're accomplishing things by the time we finally start hitting some discoveries we'll have to pack up shop and go our separate ways. Stuff like that makes me excited for grad school where I'll be able to sit down and just focus on doing research until I come up with something.

Blog #18 Nothing Is as It Seems

Posted on June 29, 2016 by aakpanJune 29, 2016

Our Luncheon lecture with Sherry Berghefer reminded me of all the reasons why trusting sensation overrated. When so much of our sensory input is being altered or straight up fabricated so a few people can make little more money or have power over a few more people it seems silly not to approach everything with a skeptical eyes. Not that I can be too judgmental. For starters I'm super gullible so most of my sentiment is annoyance with myself for getting fooled all of the time. The other half of that equation is that I like fooling others. There's something crazy about getting others to buy into the illusions you create. I think that's also the source of my motivation to recreate some Escher shapes using 3D printing for my deeper dive project. Making what should be physically impossible structures is too much of a golden opportunity for me to pass up.

Blog #17 Printing is Hard

Posted on June 27, 2016 by aakpanJune 27, 2016

I've never really taken the beauty of 3D Printing for granted. To me it always seemed like a modern miracle of science and I guess that's part of the reason I wanted to be in a deeper dive about it. However I didn't really have an internalized understanding of how ridiculous it is of us to ask the little arduino on the Makerbox to execute the construction of a precise approximation of a 3D object only using the equivalent of a rectangular Lego brick that you can't rotate. Today's lesson in general kind of reminded me just how new this whole consumer level 3D Printing business is. There were so many questions asked that Alex answered with maybes. I know part of that is just Alex's personality but part of that is also the fact that nobody is really an expert about this stuff. Which puts me of the mind that if I can master this it'll be pretty beneficial to me.

Blog #16 The Fourth Industrial Revolution

Posted on June 24, 2016 by aakpanJune 24, 2016

As we start our deeper dives I've found myself more engaged in discussions about 3D printing than I thought I would be. I was a little bit worried when I got assigned to that group in part because it was my second choice and also because I thought Alex's soft voice would out me to sleep. Don't get me wrong I really like him but his voice is so quiet and soft but so far it hasn't been an issue and I think that's due mostly to how interesting additive manufacturing and all of it's implications are proving to be. Like honestly a case could be made that if the potential for consumer level 3D Printing is fully realized we could be on the cusps of another industrial revolution. That's crazy!

Blog #15 Future Job

Posted on June 23, 2016 by aakpanJune 24, 2016

Since I was a youngin I wanted to be an inventor. But like most kids I never thought about the limits of manufacturing design. And honestly until recently I didn't really think too much about it. But as of late I've realized how time consuming and potentially costly having to prototype every design tweak would be. In order to do science you have to isolate variables so you can identify relationships, so if you theorize that changing that one little thing will make a big difference you can't test your theory without building a whole new prototype. This realization really makes the work of guys like Dr. Hsu and Dr. Krishnamurthy that much easier to appreciate. With the ability to test the effects of even the most insignificant changes right from the get product development process gets minimized. And since product development is what I most want to do as a career I guess I'll be indebted to guys like them for making my future job easier.

Blog #14 Busy

Posted on June 22, 2016 by aakpanJune 22, 2016

This week's been a little bit hectic. In regards to our to do list we probably have twice as many things due by Friday than usual. Now honestly most of these things are soft deadlines that can be ignored or pushed back if they're too stress inducing. But the whole point of these milestones is so we can keep pace for the finish line so falling behind is a bad idea. Perhaps it's a sign our group should switch tactics. I feel like we should transition to doing more work outside of the office because of late the deadlines seem to be overwhelming. It could also be that this one of those challenges baked into the program. Learning to keep your head down and work steadily in spite of deadlines looming over the horizon might be the goal of the barrage of tasks or perhaps it's just an attempt at simulating the tough life of grad school. either way me and my crew will come up with some solutions.

Blog #13 Testing Time

Posted on June 21, 2016 by aakpanJune 21, 2016

Earlier this morning me and my partners in crime Eric and Rocio continued our never ending crusade to somehow make Solidworks do its job. We intended to drafts some designs but it took what basically amounted to 3 hours to do. I think most of the fault lies on us for being incompetent but I guess only having a total of 2 days experience working with this software probably didn't help. Honestly I complain but it was fun trying to crack problems with the others especially when we finished the drawings. I especially enjoyed having to call upon long dormant skills like basic geometry in order to get things how we needed. Now it's just a matter of taking our plans to the lab and testing it out with Nate and Doc Claussen and I await it eagerly.

Blog #12 Unitards

Posted on June 20, 2016 by aakpanJune 20, 2016

I must say I missed using software that let me just go crazy. So far very little of my project has been built from scratch but that's just because I don't like doing more work than I have to. And I think that's a good mindset to approach programming with. Good programmers don't reinvent the wheel. I understand that the point of the exercises is to get practice with the basics but since those basics are basically the same as Maya and there's no right answers I feel justified in my approach.

Post #11 Do Me a Solid

Posted on June 17, 2016 by aakpanJune 17, 2016

I've been getting a little frustrated with Solidworks as of late. Part of that is practical in that I'm having trouble using the software to design the lateral flow assays we're trying to make in our project. But that can be addressed with some instruction from the grad students and my cohort. The more annoying thing is how limiting it feels

compared to Maya. Obviously different they're different programs created to let people do different things but going from the world of off the wall unlimited options found to a pragmatic program grounded in real world physics is quite the transition. As a result it's been a little bit of a struggle to not get bored or let my mind wander a little. I think in the future switch the order that these two softwares are taught would be a good idea.

Blog #10 Didn't Notice That

Posted on June 16, 2016 by aakpanJune 16, 2016

Nothing is paranoia inducing as being reminded that your perceptions aren't reality. Although on some level I like it, there's a sense of wonder invoked when you realize that you might be missing some pieces of the puzzle. And knowing that there's more to the world than what I see makes me appreciate how experiences can color ones perception. Now it's worth noting that Dr. Veronica Dark talked about other things but the interaction between bottom up sensation and top down expectations stuck with me most. The most fascinating part being the focus on how attention and expectation determine how much info our brain ends up interpreting. It gets me wondering about all the things I miss because I'm not looking for them.

Blog #9 Study Music

Posted on June 15, 2016 by aakpanJune 15, 2016

Earlier I was trying to decide what I would play for background music during blogging time and it's been proving to be more difficult then usual. Like I legit spent 15 minutes this morning just staring blankly at my screen. I've narrowed the cause to a couple theories in particular. The first being that I listen to everything. People say that because they don't want to deal that because they don't want to deal with the vulnerability of being more specific but for me that's actually true. As you might imagine it leads to a curse of blessings where I have to pick a few things out of the legion to listen to. But that's always been the case with me and it's never been so reluctancy inducing. Which leads me to my main theory. I don't do a lot of writing that's both organized & introspective so journaling calls upon a territory of my brain that I'm not used to using. It's not like studying, drawing, or exercising where I know what kind of music helps me accomplish the task. As a result I'm kind of slowed down when creating a new playlist. Why does any of this matter? Well learning how to create an environment conducive to learning optimally is a pretty important skill for grad school and life in general, so I'll take this silly mini crisis as a chance to improve on it.

Blog #8 Bro, Why Are You Even Here?

Posted on June 14, 2016 by aakpanJune 14, 2016

So Today we had a talk with Dr Hsu about his past modeling research and graduate school in general. A lot of great questions received great answers but the greater theme seemed to be about finding motivation. He stressed that with the difficulty of grad school classes and the frustrating nature of research one really has to keep in mind the reasons why you wanted to go to graduate school in the first place. And this got me thinking. Why do I want to go to graduate school? I have a layer of obvious and not necessarily untrue answers to that question (wanting greater opportunity, considering academia etc.) but I feel like there is a more all encompassing core motivation beneath that. Maybe there isn't anything more to my desire to continue in higher education besides a couple of logical reasons. But I doubt it. Humans aren't logical beings. We have a gut feeling and use what we know to retroactively justify that. Knowing that I can't help but want to push pass the usual suspects I give myself. Besides understanding that core motivation will be a good exercise in introspection.

Blog #7 Child's Play

Like many kids raised in the US I was in love with Legos as a kid. Lego was and still is really good at marketing themselves as an outlet for creation and creativity and as someone addicted to making things it always felt like they were talking to me. That's the same kind of feeling I get when I play with Autodesk Maya. Maggie started teaching us the basics of Maya today and honestly I'm pretty sure I missed some portion of the lesson because of how much fun I was having toying with all of the settings. Don't get me wrong it won't take long for me to find a balance between paying attention to the teachers and pushing the limits of my learning but I'm glad that we're learning something I find so interesting that I have to restrain myself. In the same vein I'm excited for the meeting with Nate and Jonathan because we'll finally get to start talking about what part of the flow assay we'll be building. Perhaps this stuff is tedious or retreads for the others but for me this is less like work or class and more like just playing with the coolest toys.

Blog #6 Lame Magazines

Posted on June 10, 2016 by aakpanJune 10, 2016

I remember when I was 11 or so and stumbled upon a bunch of old magazines in the basement. The old issues of Time and Nat Geo were pretty fascinating to me but I wanted a legitimate science magazine so I tried going through one of the scientific journals in the stack and boy was it unpleasant. It was the literary equivalent of running into a wall. The language felt needlessly esoteric and jargon heavy, everything was so dense, I gave up immediately. Fast forward 8 years and I've committed to science as a career and am finally internalizing that I need to slay this dragon if I'm ever going to gain or add value to the world of research. The good news is that I've made a lot of progress. Over the years I've learned through experience how to avoid absolutely wasteful reading and I'm sure I've osmosed a thing or two from Angelica and Karen's journal club classes. However the improvement in paper reading I've had over the past week and half can probably attributed to the fact that 90%+ of our research project has been composed of reading papers. During Journal club Angelica stressed the whole practice makes perfect element of a academic papers. And I'm observing this to be true. Reading 15 pg of academic writing daily is stretching me and I don't enjoy it all the time but I don't doubt that I'm benefiting from it.

Blog #5 Ain't Never had a Friend Like Me

Posted on June 9, 2016 by aakpanJune 9, 2016

Days like these are easy for me to enjoy. I chalk it up to being a man wired for action but when I have a lot of things on my list to cross off it and succeed in doing so it really fills me with satisfaction. As for what I did today, we finally got to have a more meaningful meeting with Nate on what exactly we were going to do for our experiment now that we've shifted focus on what part of modern biosensor model needs improving. Hilariously the hardest part of our meeting was not understanding the complex material we've been discussing but rather finding the room we were supposed to meet in. I'm not exaggerating when I saw we spent more than 20 minutes wandering all throughout Gilman Hall. Once we got back we then went to a lunch meeting with Jim Oliver. I recognized the name because Eliot had mentioned Jim being a business partner and one of his closest friends. Now I'm really curious to see what their interactions look like considering that they're opposites in basically every way. Whereas Eliot is outgoing, put together, and somewhat intimidating Jim is more soft spoken, easy going and chill to a point of almost baiting you to underestimate him. Actually now that I think about it, it makes sense that such different people would be friends. You don't have to a genius to know that you benefit the most from exposing yourself to those who are different from you. Which kind of ties into what Jim was mentioning about the need for STEM fields to become more diverse. We all gain more and learn more when we have a greater spectrum of ideas, experiences and perspectives being utilized to solve problems. With that in mind I'm glad that my SPIRE cohort is filled with such a dope variety of folks because it more or less guarantees that as long as I'm willing to listen I'm going to learn a lot from them truth be told I already have.

Blog #4 Awkward Gaps of Time

Posted on June 8, 2016 by aakpanJune 8, 2016

It feels weird to be in a class setting where how deep an understanding I get is dependent solely on my own comfort & ambition levels. Sure those things have proven essential to my success in the classroom but here they're practically all that matter. No grades, no teacher-student politics, no student-student politics etc. It's like when I try to teach my self stuff over the summer except I have support from teachers and I'm not getting interrupted every 10 minutes to go pick up one of my annoying siblings. I think that this kind of environment is proving to be helpful. For starters despite the fact we've been covering super basic stuff in C++ I've gotten to learn some dope things about the C++ math class and Visual Studios because I've been given space to customize and push my own learning. I think my big issue right now is trying to juice more productivity out of the little moments in between scheduled time. I don't know if it's just that I need decompression time or if I'm just being lazy but between the classes and meetings I find myself not doing anything despite the fact there are clearly things still left on my to-do list. So I guess I'm going to have to start putting a little more effort into a solution on that front.

Blog #3 Timely Thinking

Posted on June 7, 2016 by aakpanJune 7, 2016

Today we had lunch with Eliot Winer one of the Directors for VRAC and it was a pretty beneficial conversation. I find the juxtaposition of Eliot's intimidating disposition with his legitimately warm and friendly personality to be borderline hilarious. I think what I've gained most from talking to Eliot has been the introspection he's inspired, in particular on the topics of time management and initiative. I don't think I've ever had a problem with time management per so much as managing time consistently. We talk about it like it's a binary where you're either responsible with your time or your not. But we all have days where we hit every item on our to-do list with a whambamthankyoumam efficiency. Likewise we all have days where the sun sets and all you can do is puzzle over how you've managed to do nothing of value with the day. What annoys me about myself is that despite knowing how to be efficient I often just am not. I think the remainder of the REU will be a good chance to experiment with methods to improve the consistency of my time management skills. I'm also fascinated by how much Eliot said he valued initiative. I think it kind of validates some personality traits I have that have often been treated as flaws. The most pertinent one being my tendency to get lost in investigating things that interest me. I think a big part of finding your dream career is doing something where even your weaknesses can be turned into strengths, and in research having that vicious desire to pursue answers will prove to be beneficial provided I work on things I actually care about. Now this doesn't mean that I'll necessarily pursue a research career but it's a good argument to keep it on my radar nonetheless.

Blog #2 Scientists Are People Too

Posted on June 6, 2016 by aakpanJune 7, 2016

What I'm digging most about this program so far is how much I'm learning outside of the class and lab setting. For the most part that's taken the form of listening to all the different folks in my REU as well as the coordinators and students in the other summer programs. But that doesn't alter the novelty or value of what I've found out. For starters I learned that Hickory Park Restaurant is one of Ames greatest claims to fame, and found that fame to be justified when I partook of some of the juiciest smoked turkey I've ever had at the group REU picnic yesterday. I also learned about the hometowns of my lab-mates. Apparently Toni Braxton is from Baltimore like Brian. Providence, Rhode Island, where June goes to school is famous for its strip clubs. And Karen is a dope artist, one so good we'll get to see her exhibit at the city art show next week! The main thing that I've learned this weekend though isn't really a new thing so much as a revisiting of a fact that I often need to be reminded of. Science is a team sport. The scientific community, like any community is made up of people. And in order for people to work meaningfully towards a goal they need to understand and appreciate each other. The things we've been doing this weekend, playing volleyball,

throwing birthday parties, going to festivals, etc. aren't superfluous. The quality time we spend together will continue to help us build stronger bonds, intuitions of each other, and ultimately make us a better team. The fact that I'm having fun is neat bonus though.

Blog #1 The Future is Alive

Posted on June 3, 2016 by aakpanJune 3, 2016

It's so crazy to think that not much more than 5 years ago things like building your own 3D printer or owning an immersive home VR console were the things of future and fantasy. But today I got to play with those same things and they were more awe inspiring as I could've imagined, and I'm excited to learn about not only this but all of the other cutting edge tech we'll get a look at. Although I'm not gonna lie I was a little bit anxious in the room with the 6 million dollar equipment because I'm kind of a klutz and I definitely almost tripped a couple time in there. I'm excited to see more cool stuff around campus but am also hoping I don't break anything too important. Also it's worth noting that the campus in general is pretty huge and magnificent. I wouldn't mind taking a nice walk around the whole place on a weekend. All in all this weeks been a good introduction to the program and now I'm even more excited to get down to work next week.