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My PEARC17 Experience

When I arrived at the PEARC17 Conference in New Orleans, Louisiana on July 9, 2017, I attended the welcoming event. Once I entered the welcoming event we started playing a question and answer game about computer science. This welcoming event was a mixer, ice breaker session, and cybersecurity talk. While waiting on the speaker, we played musical chairs, and whoever did not have a chair had to state their names, where they are from, what school they attend, and something weird about them so we would get more comfortable with each other. Tracey Lin and Tracie Smith from the FBI Cyber Squad in New Orleans talked to us about cybersecurity. Tracey Lin and Tracie Smith showed us how the FBI really operates. It is split in two, there are technical people and non-technical people. They gave us examples and real-life cases about people who were put away for cybercrimes. A local police officer gave a short briefing on safety in New Orleans. He made it aware of many crimes that happens day to day that does not usually happen in most other places often.

On Monday, July 10, 2017, I attended the Introduction to Python tutorial. The Introduction to Python tutorial was a hands-on informational tutorial about the basics of the Python programming language that included all the tools needed to attend modeling day. Katharine Cahill, Antonio Gomes-Iglesias, and Steven Lantz covered variables, types, operators, input/output, control flow, functions, classes, lists, libraries, plotting, data files, and Jupyter notebooks. This tutorial was really intended for Python beginners and that is why it was so hands-on. Many techniques were presented in live-demo mode, and each section featured an exercise so the students could try the commands or methods out ourselves.

After I completed the Introduction to Python tutorial, I volunteered to help with the XSEDE New User Tutorial: Using Science Gateways. I assisted Sudhakar Pamidighantam with the XSEDE tutorial. The other presenters were Amit Majumdar, Suresh Marru, Marlon Pierce, and Mark Miller. I did the head count of members that attended at that moment. My other duty was fulfilled by taking up and counting surveys for the program. Although I was volunteering, I tried to engage in the tutorial and go along with the presenters. This tutorial was built upon the XSEDE15 and XSEDE16 tutorials. The purpose of this tutorial was to supplement the standard XSEDE new user tutorial with overviews about how to use science gateways so that new users could start using XSEDE for scientific research right immediately, at the conference and at home. This tutorial targeted scientist who are new to XSEDE and who are familiar with common software in their field. This tutorial also provided a brief overview of XSEDE and the science gateway program. Most of the tutorial was a sequence of hands-on activities that introduces students to domain specific gateways.

After my volunteered tutorial, I attended the student mentor dinner. This dinner was set up for students and mentors to get to know each other more playing questions and answers and network with other people. My mentor's name is Jan Cheetham. Jan is the Research Cyberinfrastructure Liaison in the Office of the CIO and Vice Provost for Information Technology, University of Wisconsin-Madison. In this role, she helps develop and sustain cyberinfrastructure to meet the computational, storage, and networking needs of researchers. She partners with directors and IT staff in the central IT center and in academic units to plan, pilot,

deliver, and assess the computation, network, security, datacenter, storage, middleware, and data management components of research cyberinfrastructure based on researcher needs and helps guide strategic planning for the Advanced Computing Initiative, including administration, physical and staffing resources, governance, planning, and sustainable funding. Before serving in this role Jan was an instructional technology consultant, taught introductory biology, and conducted cell and molecular biology research.

On Tuesday, July 11, 2017, I had breakfast with my mentor and a couple of other students and mentors. We talked about my agenda for the day and graduate school options. Ms. Cheetham also talked to me about her agenda for the day and the Super Computing Conference.

I attended the student modeling day. Student modeling Day was an amazing opportunity for us to work in teams to understand a model, understand what it does, simulate a range of conditions, write and test the computer codes using Python that was needed to solve real world problems, improve the user interface to the code and validate code against real data or more sophisticated models. I worked in a team of seven and we completed the zombie apocalypse assignment. We were given a code and had to simulate the program making the zombie/human situation more realistic. I had computer problems for approximately three hours, but I managed to help and edit the actual presentation.

After student modeling day, I attended the poster reception. I was given the chance to talk to the poster presenters about their plans to improve and enhance advanced research computing. I spoke with many of the poster presenters and had a difficult time voting for one poster.

On Wednesday, July 12, 2017, I attended the student mentor lunch. At this lunch my mentor, Jan Cheetham, and I discussed the previous day. Ms. Cheetham gave me a lot of advice about my plans. She taught me about how to talk, act, and introduce myself when it is time to apply for jobs. We also discussed many opportunities that I am eligible for and could be a part of.

After the luncheon with my mentor, I went to speak with the exhibitors. There were many exhibitors such as Intel, Dell, EMC, Lenovo, CASC, DDN Storage, BioTeam, NVIDIA, and many others. I talked to each exhibitor one on one to get more clarification on what it is they do and what do their companies offer. The most interesting conversation I had was with NVIDIA. I talked to Ronak Shah and Bradley Palmer about artificial intelligence and GPU's. Technology enhances more and more by the day and is becoming able to think like we do.

That night I attended the visualization show case and reception. The visualization show case featured some of the most computationally intensive simulations that have recently come from HPC systems. We were able to vote for the most compelling visualization. Some of the exhibitors were in attendance. This was also an opportunity to network with other as well.

On Thursday, July 13, 2017, I attended the student modeling day presentations. I watched my peers present, explain, and describe their work. My group presented our zombie apocalypse assignment as well. We were given the opportunity to ask questions if we did not understand anything. It was great to be able to support our peers as well as receive support for our hard work.

The last thing I took part of was the awards luncheon. The awards luncheon closed out PEARC17 with a presentation of awards the best papers in each track, best student paper, best

student poster, and best visualization showcase entry. While enjoying our delicious meal, we were introduced to PEARC18 location.