

Motivation

The day that I received my first college acceptance letter has become one of the most important days in the past decade of my life. It's not about the institution that it came from or even the words of acceptance. Being a black individual from the city of Newark, New Jersey, many of the adults I grew up around had not seen the likes of such a letter and in a family where no one else had attended college, getting that letter was one of the most uplifting and empowering moments for me. That letter sparked a transition of growth that I have yet to complete and, quite frankly, may never complete. That letter, and those that followed it, helped me to realize and embrace the idea that there is no cap on my potential or future contributions that I am able to accomplish.

Technical Experiences

I am actively pushing boundaries to succeed in becoming a computer scientist. This past semester my computer science (CS) commitment included two CS courses, CS research with a professor, and CS tutoring. I had to learn and practice with two different programming languages, one for research (C#) and one for Design of Algorithms(C), while also working with both C++ and Java for my job as a tutor. I was also tasked with weekly research write ups where I explained what I had done and the papers that I read for the week. I independently learned and researched both Git and Python to participate in a local competition (Hackathon). The amount of work and studying was intense; however, my determination, discipline, timeliness, and work ethic enabled me to excel in some of the hardest courses that I've taken. These are the qualities and capabilities that I can apply to this REU experience. I am able to multitask and follow sound time management practices across projects and classes. The research project that I am working on now is a web application designed to schedule students for tutoring at TCNJ. This project involves working with HTML, CSS, Semantic-UI and PHP alongside Maria-DB to create a full-stack application with a very user friendly UI. On the more technical side, the main aspects of research are on creating a program that allows for multiple threads and ensuring concurrency when multiple staff members are actively working on sign ups. Right now it's in the beginning stages of the development, so most of the work is doing research on different topics and reporting to my research advisor. Although I'm not very familiar with the technologies and subjects right now, I am willing to learn whatever it takes to get this project to the state that the tutoring center requests. These traits and desire to push myself are what would make me a good researcher in your program. I am determined to grow as a computer scientist, even if the task may be challenging.

Research Interests

I am particularly interested in the projects "Exploring the energy and performance tradeoff of deep learning", "Robotics- aware infrastructure" and "Human in the loop text labeling". A deep study into machine and deep learning would be most interesting because I feel as if it is a field that is quickly growing and solving incredible problems that I would like to explore. As for robotics and

artificial intelligence, this field has great applications to some of my interests like autonomous vehicles and smart living devices. Experience with text labeling and other natural language processing techniques could have applications to different accessibility technologies that I'm also interested in. Although I am still unclear of what my future will entail, I do believe that all of these projects could have an important impact on my life.

Summary

I am energized by opportunities to learn and experience new things. I want to be a contributing member of your team, getting the chance to research and develop in real world scenarios on projects that could have a lasting effect on various communities in particular and the study of computer science in general. Many of these fields like artificial intelligence, machine learning, big data, data science, internet of things and smart living have such great potential to change our lives. I want to learn more about the capabilities within these subfields and experience developing applications to support advancements. Growth and improvements in these areas make me excited to be a computer scientist in this day and age. If I could have the opportunity to perform research in even just one of these fields it would be such an invaluable experience.

I've come a long way in a short amount of time, and I am determined to go farther. I continue to explore possibilities for my career path; conducting research in a university setting will help me learn more about graduate study opportunities. I am hoping to make this next experience with this REU opportunity the next step into my career of life-long learning, discovery and innovation.