

Lilshay Rogers, Professional Statement

Hello, my name is Lilshay Rogers and I am currently attending Elizabeth City State University located in the heart of Elizabeth City, North Carolina. I am double majoring in Computer Science and Mathematics. Entering in the field of computer science not only places me in one of the world's most demanding field of study, but it also grants me the chance to learn amazing things like programming languages, robotics, and software engineering.

To further assist me on the path to mastering computer science and math, I have recently been accepted into the Center of Excellence in Remote Sensing Education and Research (CERSER) program directed by Dr. Linda Hayden. Being a part of CERSER allows for undergraduates to conduct extensive research, the active participation in national conferences, and summer internships.

In April 2018, I was able to complete my first research project titled *A Multivariate Regression Analysis of Hospital Stays in a Nosocomial Infection Control Data* under the mentorship of Dr. Julian Allagan and along the side of three other CERSER members as well. Utilizing the R program language, we were able to develop and analyze several linear regression models to predict the leading cause of hospital stays in the US with project data extracted from CDC-Atlanta. In particular, we aim to answer the question: what leading factors influenced the response variable 'Stay' the most. In the end, we found that the variables 'Nurses', 'Risk', 'Census', 'Age' and 'Region' had the biggest impact on longer hospital stays. As a result, we recommended hospitals find ways to lower the risk of hospital infection, and perhaps increase the number of nurses.

To help me further build on my skills of coding and programming, I participated in the 2018 Science Gateways 4 Week Coding Institute in the July of 2018. Throughout the four weeks, my fellow interns and I were able to utilize several different programming languages such as R, Python, Java, and HTML. Additionally, I attended a number of workshops that allowed me to get in-depth understanding of the world of supercomputing and ethical hacking. During the third week of the institute, I was able to attend the Practice & Experience in Advanced Research Computing Conference (PEARC) 2018. There I found myself networking with quite a number of professionals from different fields such as academia, industry, and laboratory. Towards the end of the conference, I took part in the SGCI Hack-a-thon. My group members and I settled for the Comic² Gateway project which entailed creating a image stacker viewer web-application that displays 500-5000 images at a time and allows the user to navigate forward and backward via keyboard commands, add point to an image, delete points, reject an image, save user's points and return list of images' points and rejected images to a server when user clicks the 'submit' button. Overall, the institute not only helped me build on my prior programming languages but also added more to my knowledge of computer science as a whole.

My goal is to graduate ECSU in a span of three years with a Bachelor's degree, in both, Computer Science and Mathematics. I also plan to further my schooling by pursuing my Master's degree and Doctorate's degree as well. In the near future, I intend on applying my skills of science and technology to a S.T.E.M career related area.