My name is Tangee Beverly. I am a Junior at Elizabeth City State University (ECSU) in Elizabeth City, North Carolina with a major in computer science. I attended at Bertie High School a school for science, technology, engineering and mathematics (STEM).

Attending to the STEM school gave me a good foundation for pursuing a technology career. In my senior year, I joined the Tech Buddies club which was for students who were aiming for degrees in the STEM field. The director of the club introduced us to an online coding website. This experience contributed to my desire to make programming a career choice.

I am a member of the Center of Excellence in Remote Sensing Education and Research (CERSER) program, directed by the principal investigator, Dr. Linda B. Hayden. This scholarship program has provided me travel to conferences, presenting research and by being a part of the CERSER program I have been able to learn new skills that can be used in my future internships.

During my academic spring semester 2016, I contributed to a team research project with CERSER. Our team performed research on Producing 3D point cloud and digital elevation models with Unmanned Aerial Vehicles (UAV), Historic St. Luke's Church case study. We used the UAV to take images of the historical landmark and with these images were processed with the Pix4d software to produce an image mosaic of the gridded area, a 3D point cloud and digital elevation model (DEM), and finally a 3D model of the historic structure.

In April 2016, I attended the ADMI conference in Winston-Salem to present my spring 2016 research. There were representatives and guest speakers from different companies such as Intel and Yahoo. Throughout the course of these sessions, the presenters shared information about their company and explained internships that were offered. I also attended the IEEE Joint meeting with GRSS and WIE at NC State University. At this meeting, Dr. Melba Crawford spoke on the ongoing remote sensing project and its results.

In summer of 2016, I interned at Indiana University, Bloomington conducting 10 weeks research. It was a great honor to work in Dr. Geoffrey Fox's informatics lab under the mentorship of Gregor von Laszewski. We had a small meeting to get an idea what certain careers we are interested in and for me it is game designing. He set up the research for me to learn Python more in depth and to get familiar with Big Data. The research tied game development with Big Data. We researched the benefits of Big Data for new programmers who are interested in becoming a game developer. This

research opened my mind to other topics in computer science such as Big Data.

At the start of my academic spring semester 2017, Derek Morris Jr and Austin Ivins led a research project titled “Ground Penetrating Radar”. We investigated the uses and methods involving the GPR, and to experience the situations in which GPR can be and useful and effective tool. It was conducted in front of the Dixon hall building also presented a wonderful opportunity to examine features that may lie beneath the ground between the buildings and the parking lot. It was chosen due the likelihood of finding powerlines and watermains. The team was successful of collecting the data, however, a couple days before presenting the data was lost for unknown reasons.

During the summer of 2017, I engaged in enlightening research undergraduate opportunity at the University of Texas at Dallas, conducting 10 weeks research. It was a great honor to work in Dr. Wong’s research lab and with his graduate students. Dr.Wong is the Editor-in-Chief of IEEE Transactions on Reliability. His research focuses on helping practitioners improve software quality while reducing production cost. He stated multiple times of the reason for this REU is to get more undergraduate students into the researching field and graduate school. They provided for us the opportunity to visit Lockheed Martin Aeronautics Company to help the students understand how software safety is used in real-life applications. The first two weeks of the summer we went to several lectures about software engineering to help us better understand software safety. My research partner and I chose to research “An Integrated Approach for Software Safety Analysis”. The overview of the research is to find a device with software that people use daily and analysis the potential dangers to the user, if there are any bugs in the software. The case study we chose was the stair-climbing wheelchair. We developed a fault tree analysis and UML state chart diagram for our case study.

My goal is to get a Bachelor’s Degree in Computer Science from Elizabeth City State University (ECSU), and further my education by obtaining my master’s degree. The CERSER program is an excellent opportunity that will provide me with opportunities to my further career.