# Professional Statement

My name is Hagen Hodgkins. I am a Senior at Elizabeth City State University (ECSU) with a major in computer science with a scientific concentration. Since a young age, I have enjoyed using computers and other forms of technology such as entertainment systems. However, it was my love of science fiction books and movies that drove me to pursue knowledge of computers.

To advance my knowledge of computers I completed digital design and Microsoft certification classes at Camden County High School. During that time, I learned about image editors and what could be accomplished with them along with rudimentary coding skills and website design. In my first semester at ECSU I was able to take part in the Center of Excellence in Remote Sensing Education and Research (CERSER) Program in which I was able to vastly expand my knowledge of computer programs and coding in different languages. As a part of the training program that was offered by CERSER I was prepared for a role in one of the research teams.

During the spring of 2015, I was a participant of a research team at ECSU that worked on creating a database. This project was titled, "Implementation of an interactive database interface utilizing HTML, PHP, JavaScript, and MySQL in support of water quality assessments in the Northeastern North Carolina Pasquotank Watershed." The goal of this project was to manufacture a database system that would house the water quality data gathered by the Summer Research Experience for Undergraduate teams during the summers of 2014, 2013, and 2011. The primary focus was how the data would be entered and displayed within the database as it was critical that the database be viable for use in the field.

In the summer of 2015, I was able to participate in two different programs. One of which was a course offered by CERSER that expanded my knowledge on the programming language, Python. This proved to be invaluable as my knowledge of Python was tested in the bioinformatics course offered by the Vikings Enhancing Science, Technology, Engineering and Mathematics (VESTEM) program. During this course, I learned that technology plays an important role in today's biology and chemical fields.

In the spring of 2016, I was a participant in a research team at ECSU that studied the waters off the coast for changes in sea surface seaweed or sargassum. This project was titled, "Quantifying Sargassum Boundaries on Eastern and Western Walls of the Gulf Stream Protruding Near Cape Hatteras into Sargasso Sea Bermuda/Azores." The objective of the project was to quantify changes in the sargassum population off the eastern coast of the United States. These changes are hypothesised to be related to the Deep Horizon oil spill that took place in April 2010. This coincides with the time that sargassum is traditionally suspected to be moving through the gulf stream as sargassum is traded between the sargasso sea and the Gulf of Mexico.

Going into the 2016 summer season I took part in a research internship. This research experience offered by Indiana University exposed me to new information. Over the course of the project, "Developing big data and development environments using Ansible," I was introduced to a new language which I had never encountered before, YAML (Yet Another Markup Language). During this time I also became more accustomed to the Linux operating system as well as working with GitHub. The project itself focused on the deployment of big data and development

environments along with their dependencies with the least amount of user interaction required. These needs to limit the required user interaction lead to the use of YAML which is proficient at the automated deployment of programs and files in bulk.

over the winter break in 2016 I had the opportunity to participate in a training program offered by SeaSpace. this program provided my with experience in the operation of their TeraScan systems as well as and understanding of how to operate related software. this program also assisted me in refining my academic and career goals towards a focus in remote sensing.

In the spring season of 2017 I was part of a research team studying NDVI and LST imagery of north-eastern North Carolina. the data we collected was from the summer months of 2015 and 2016. we were looking to identify noticeable differences in the changes between LST and NDVI data for the same location in order to discern a relation between the two.

In the future, I intend to take part in additional internships and strive to further my education in the computer science field, taking what I have learned while in CERSER as a base for the application of my skills. After I graduate, I intend to pursue a masters in computer science with a focus on remote sensing