

The first experience that piqued my interest in computer sciences was during my sophomore year in high school. Even after graduation, my interest in the STEM fields never waned, with a special fondness for programming. That was why I decided to study information technology as my major when I attended university for the first time. It was also during my first year in university when I realized that I knew painfully little about the field I was going into.

During the summer of 2022, I enrolled in a Linux and Jupyter Workshop hosted by the Science Gateway Community Institute in an attempt to fill that hole in my knowledge. The workshop consisted of online sessions of instruction and discussion about resources available to both students and researchers within the field as well as practical applications for the skills learned in class. During my time in the virtual sessions, I received training that furthered my skills with many common tools within the field of information technology and a deeper insight about daily occurrences in the field of data analytics. Some of the skills I gained during the four weeks I spent in the program were using Linux, using HTML to build a webpage, receiving ethics training, and how to design and implement a model using Jupyter Notebooks.

Over the course of the summer camp, I gained proficiency in many skills. Through the Bandit wargame hosted by OverTheWire.org, I acclimated myself with the navigation of the Linux operating system and terminal and some of the tools available in Linux like the compression tools and secure shell. I also gained a basic understanding of HTML and Python 3 through sessions of remote learning through CodeAcademy.

The Linux and Jupyter Workshop also introduced guest speakers from various organizations who spoke on various topics such as the uses of programming in research and possible career paths available to those pursuing the path of computer sciences and information technology. Through the guest speakers, I gained insight about the kinds of resources available to me as a student as well as advice for how to be successful as a student pursuing this field. Some examples of what was discussed was how to access high performance computing resources that my university might have and how to transform an idea into a feasible concept through napkin drawings.

Another learning opportunity provided by the workshop was the ability to attend the Data Thread conference hosted by Voltron Data. This conference featured live speakers who discussed

Apache Arrow, as well as the future possibilities of high performance computing. Through this conference, I have grasped the underlying logic to how high performance computing works.

During the last week of the workshop, I was assigned to design and implement a model for disease propagation with a group of my fellow students. For the project, we first asked a question about a dataset and designed an algorithm to solve it. After designing the algorithm we wanted to use, we proceeded to use Jupyter to code our algorithm into a program to generate a data set to answer our scientific question. We then proceeded to compare the data generated with the figures collected in the field to see if we had accurately simulated the environment.

These experiences I gained from the workshop have encouraged me to further my studies into the fields of computer science and information technology and explore the many kinds of careers available in the field. The skills I gained from this workshop will surely aid me in the development of my future career. From this workshop, I plan on continuing my education and earning my BA.