

Puja Roy

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CET 4900 - OL60

Internship Summary

Throughout my internship at NOAA: National Oceanic and Atmospheric Administration, I gained technical skills in Data Science by working with Python and analyzing weather/climate datasets collected from the NY-uHMT weather station. For the most part, I mostly worked with Python in Jupyter Notebook and leveraged libraries/packages such as NumPy, Pandas, Matplotlib, Seaborn etc. These libraries/packages are essential in helping analyze and visualize the largescale datasets that I worked with. Even through there is still a lot of work to complete in terms of analyzing the data collected from other sites, I mostly worked with analyzing the Astoria site dataset.

This internship played a key role in my interests because I am highly interested in AI, Machine Learning and Data Science. In fact, my favorite programming language is Python because it is mostly used for back-end development in web applications and data visualizations. During the duration of my internship at NOAA, I enjoyed analyzing NY-uHMT datasets utilizing Python because of its easy syntax and ability to work with crucial libraries/packages. Most importantly, I learned how to preprocess, import, and clean largescale datasets by leveraging various Python code and algorithms.

The most challenging part of my internship was meeting deadlines and removing outliers. This is simply because the datasets that I worked with were immensely messy. In other words, the datasets included unnecessary data such as NaN values. To create and plot graphs for data visualization, I had to import the Seaborn and Matplotlib Python packages in for the code to execute successfully. I also had to convert some parts of the data to move further with next

procedures. I also came across errors that took me excessive time to figure out and troubleshoot the errors. I appreciate my mentor for selecting and guiding me throughout this engineering project. To add on, conducting research, reading articles/resources, and watching videos assisted me with completing this project. I feel rewarded for interning at NOAA, and I hope that I can work for the federal agency in the future again.