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Final Project

Data Tools:

From what I learned from this module is the basics of organized structure programming. I've learned about how there are certain elements of data that can only be found through the use of metadata, as well as finding basic data statistics when more than one file is being stored and both of which can detect certain specific pieces of data. In terms of data sets, I had a reasonable grasp of the difference of various patterns of statistics that are increasing, decreasing, or remaining constant. I managed to track down the average mathematical increase on a table, such as the average yearly increase, and how much the numeric increase or decrease, and using that pattern to predict the results for the year not appearing on the graph.

Big Data:

Upon going through this module, the one thing I've learned is the heavy emphasis on storing huge amounts of data on just one section. I discovered that big data is found in areas that are used in my everyday life, such as social media, and google. For progress, I learned that the use of parallel computing can separate processing certain aspects of a program, and can reduce the run time of the computer analyzing the data structure. One way of separating the data

analysis is by dividing the structure into separate parts and have the program work on those aspects, and not have it all crammed in one go.

#### Bias in Machine Learning:

What I've learned about this module is that there are an abundance of automatic algorithms that can function on their own accord. While on the surface level, they're deemed super useful, but I also learned that the machine learning algorithms also suffer from bias learning from human thinking. I learned that a lot of the bias' are through racial identity and face recognition that typically can provide inaccurate results, especially when it comes to the criminal justice field when tracking down suspects, specifically when using the facial recognition algorithm. And when it comes to the race and sex bias in algorithms, they can determine either a person of a certain ethnicity are at risk of re-committing a crime, when that wasn't the case, or analyze job resume's that indicate someone is not fit for the applying job, all because of their gender.

#### Unit Test:

My experience when it came to the unit test was I was able to obtain a decent grasp of the three topics that were discussed. I ended up having to take the test twice, the first time I failed, the second attempt was much better, so far when it came to analyzing big data and finding basic patterns displayed on data sets were no problem for me at all. Both attempts on the test didn't really have questions that were related to bias in machine learning, but I did improve on my knowledge when it came to basic computer statistics.