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CMP – 262 Data Science Programming

Professor Binowski

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Final Project – Fishing and Water

Methodology and tools:

In this project I used several tools and libraries in the Python language in the Jupyter Notebook environment. Some of these include Requests and BeautifulSoup (for web scraping of fishing reports), Pandas (for data structuring), Natural Language Tool Kit (for natural language processing), and Matplotlib (for data graphic and visualization) among others.

I also leveraged .gov resources for quantitative environmental data about the West Branch’s streamflow amounts and rainfall amounts. These came from the National Weather Service and US Geological Survey and conveniently downloaded as .csv files.

Questions:

The questions here are related generally to how water affects the sentiment of fishing reviews. Namely, how does cubic feet per second of streamflow discharge correlate with sentiment? And how do rainfall amounts correlate with sentiment?

Insights:

We found that the fly-fishing shop’s report sentiment correlates tightly with water in the river. That is, more rain and more streamflow are present in tandem with the more positive fishing reports. On the other hand, with low water fishing reports trend towards negative.

Recommendations:

The audience for this project is really the people who fly fish up on the Delaware. A recommendation, in that sense, is that perhaps when water is low and their intuition is negative regarding river accessibility, they may reconsider and try to find some surprisingly nice outcomes.

Future Work:

Future work to be done with this project will include finding the correlation between other quantitative datasets like water temperature, and water turbidity with respect to fishing reports.