Increase Revenue using Sentiment Analysis

DS 4002- Spring 2024- Professor Alonzi - Created by Ashita Sahu
Due: 2 weeks after start
Submission format: Upload to github repo to canvas

General description: Submit a github repo containing your work plan, all code attempts, and results.
Preparatory assignments: None, some background in NLP is helpful

Why am I doing this?
- Course Learning Objective: gain experience using NLP Models to build a model that will have real world applicability

What am I going to do?
In this assignment you will utilize available data to build a machine learning model to increase sales revenue by using sentiment analysis to analyze customer reviews. You will need to find a customer reviews dataset online to work with. You will need to draw on your experience with machine learning techniques and utilize the internet to learn more about NLP if you do not have prior experience. You will also need to draw on your knowledge of ML evaluation to evaluate your model and explain where its gaps may be.

Deliverables include:
- Github repository containing your code, any additional data used, links to any outside sources consulted, figures demonstrating that you have evaluated your model
- A brief, 1 page write-up of the project addressing what you have learned throughout the project and how you plan to apply this to future projects

All of this will be submitted electronically via canvas
Tips for success:
- Get creative! There is no right model to create, if you can find a way to incorporate more do it!
- Don't be overly ambitious: if you have no experience in NLP, start slow. It is unlikely that going to build a model that could be used as an enterprise solution!
- Embrace the challenge: especially if you have never used NLP models, this type of model hard. Utilize the resources available to you (Professors, TA's, Peers, Stack Overflow) and t pride in grinding this out

Example Dataset:
- You can use this dataset if you would like, but this is an example of something you can find online:
  https://www.kaggle.com/datasets/datafiniti/consumer-reviews-of-amazon-products