SENTIMENT ANALYSIS OF PRODUCT REVIEWS

1. **Project Overview:**

This Project named "Sentiment Analysis of Product reviews" and the objective of this project is that, it classifies the entered product reviews and provide the corresponding sentiments of the entered review.(positive, negative, neutral).

1. **Folder Structure:**

* SentimentAnalysis.ipynb: The full source code of the project is here, from importing the dataset to training and evaluating the model.
* SentimentApp.py: The full UI of the sentiment analysis is created in this file.
* SentModel.pkl: This is the created pickle file for the model that is used in the project.
* SentVectorizer.pkl: This is the created pickle file for the vectorizer that is used in the project.
* amazon\_reviews.csv: This is the csv file on which the whole model is trained and tested.

1. **Libraries and Environment needed:**

* Python Libraries & Tools: pandas, numpy, pickle, re, svm, scikit-learn etc.
* Setup Instruction: pip install -r requirements.txt

1. **Run code :**
2. Open the Jupyter Notebook and then open SentimentAnalysis.ipynb and run all the code cells.
3. Go to the root folder of the project, open command prompt and type:

streamlit run SentimentApp.py

1. **Input & Output Explanation:**
2. Input: You have to enter a text basically a detailed product review.
3. Output: After entering the input, it will give you a prediction whether the text you have entered is positive, negative or neutral.
4. **How to test with new data:**
5. First, when you have successfully executed code cell and have your streamlit UI interface by running the streamlit run SentimentApp.py
6. Enter a detailed product review (e.g. I really wanted a 128 GB card, but at less than half the price, as well as actually being in stock right now, this is a good buy, and works well. I couldn't find anyone that would say for sure when I was looking to buy, but this is compatible with Mac.)
7. Upon checking the text it will generate sentiment based on the detailed review whether its positive review, negative review or neutral review.