In recent years there has been a great demand for Non-Opioid Analgesics in the pharma industry. People are demanding the non-opioid pain medication for several chronic and acute pain issues. Currently there are 17 such drugs which are in the late stage of clinical development. Since there has been several studies exhibiting the addictive nature of the opioid-based chronic pain drugs, people are demanding for better alternatives. The market for non-opioid treatments is expected to more than double over the next five years to $22 billion. We have decided to perform a through market analysis to derive some useful insights by scraping WebMD website.

According to the U.S. Department of Health and Human Services, 116 Americans die daily from opioid overdoses. In 2017 there were an estimated 50,000 drug-related deaths in the United States, with the highest increase related to opioid drugs and the cause being overdose.

There is a need to study current pharmaceutical market and analyze the trends in order to come up with more effective and marketable drugs. We are going to try and describe the current prescription pain medications market in United States. For this purpose, we are primarily using WebMD to get our data. We are going to scrape the website to mine the patient reviews about the top 10 most reviewed pain medications.

Using Python’s BeautifulSoup, Requests and Scrapy framework we are going to address some business questions that might prove really useful for the chronic pain medication market. We plan to extract data from WebMD drug reviews regarding the drugs, condition treated, length of treatment, age of the patient, gender of the patient, and their comments. We can also gather the data regarding the ratings that patient give to the respective drugs on the scale of 1 to 5 on the drug’s effectiveness, their satisfaction with drug, their ease of use etc.

There will be some cleaning and feature extraction of the data to get the desired output from the unstructured data that we will gather from the website. By taking some top performing companies as our baseline we will try and analyze the performance and try to pull out some useful information from their reviews. The sentiment analysis on patient reviews can reveal the general attitude of patients towards these companies which might help them focus on relevant subject matters.

The pharmaceutical questions that can be answered are:

1. Who are your potential customers?
2. Who are your main competitors?
3. What market segments should be high priority?
4. What are patients expecting from the treatment?
5. What messages should be used to launch the product?

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