

Problem Statement:

A drug is generally administered to a patient in certain patterns or in regular intervals of time. For example Chemotherapy which is drug treatment in case of Cancer is generally given to patients in an interval 3-4 weeks, i.e. every 3-4 weeks patients are administered with the drug.

Similarly to Chemotherapy, "Target Drug" is also administered/prescribed in certain patterns, we want to analyse in what patterns "Target Drug" is administered or prescribed to patients, there might be multiple patterns in which "Target Drug" is administered/prescribed, come up with an analysis which to extract the dominant patterns in the data using clustering or other unsupervised techniques.

Visualise the prescription patterns with time on X-axis (month) and prescriptions on Y-axis for each of the patterns you are able to extract(Below is an example of a prescription pattern, where a prescription is made at least once in the first two months followed by one prescription for every two months).

Solution:

Create the dataframe from the train.parquet file.



Take the data's of the patients who took the targeted drug and store it in a new dataframe named "td_df".



Find the unique months of each patients and create a bar plot to visualise the data