



# Adverse Drugs


AND THEIR PROFIT

# Members

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- ▶ We will be researching the relation between the adverse effects of FDA approved pharmaceuticals and the stock behavior of the central and respective manufacturers.
  - ▶ The idea is to find a possible relation between a highly successful or poorly performing central manufacturing institution and their pressure to keep their clients safe.

# Prior Work

- ▶ Not much information has been investigated between the severity and frequency of specific reported medications with the Adverse Event Reporting center of the FDA

# Datasets

- ▶ FDA - Adverse Event Reporting - Drug Information,
- ▶ FDA- Adverse Event Reporting - Patient Outcome
- ▶ Federal Drug and Food Administration (FDA)
- ▶ Downloaded on the cloud

# Proposed Work

- ▶ Data Cleaning: To properly clean the data, we must eliminate specific attributes that do not correlate with our specific idea, this would be arbitrary identifications, and irrelevant data
- ▶ Data Preprocessing: It will take time to match each Identification number with each specific year. Furthermore, under the Patient outcome Dataset, we must assign numbers to correlate to specific outcomes, rather than string variables.
- ▶ Finding the most frequently reported drug by using apriori algorithm From the most frequently reported drugs, find the most frequent outcome (death, disability, minor adverse effect etc.) and looking at the most severe outcomes. Showing stock behavior of manufacturing company with the most severe output

# Tools

- ▶ Jupyter Notebook – to help process the Chi square of specific attributes.
- ▶ Excel – to help produce visualizations, as well as combine several data sets and find patterns
- ▶ Github – version control and storage for any processing code and tools

# Evaluation

- ▶ We plan to try and find a correlation between specific severe drugs, or specifically hazardous outcome reported within a specific year.
- ▶ With this information, we will try and draw a comparison to prove or disprove the hypothesis that Pharmaceutical companies either lose or gain profit during years where adverse events are reported to the FDA
- ▶ From here we can see whether there is profit in death for pharmaceutical companies to accept a wider area of harm when publically releasing a medication.