**CSE4022-NATURAL LANGUAGE PROCESSING**

**TITLE: Drug Prescription System and Chatbot**

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**J component Write-Up**

Prescription of accurate drugs is one of the most important therapeutic transaction between physician and patient. It is a health care program implemented by a physician in the form of instructions that govern the plan care for an individual patient. It is a written order for the medication to be used for diagnosis prevention and treatment of specific patient directed by physician. It is a crucial task and suggests prescriber’s responsibility towards the clinical care and the safe monitoring of the patient thus also carries legal implication.

Our objective in this project is to ensure that the patient gets information about the right medicine and right dose easily and accurately.

We will be creating a **web application** with the help of **NLP Techniques** coupled with **Machine Learning algorithms** which will be used to prescribe certain drugs and medicines based on objective reviews from multiple users. These reviews will be defined in a dataset which contains the name of drugs along with User ID and a review. Using the review column we will be analyzing the sentiment of the review and will be categorizing the drugs from best to worst. The website will provide links to buy the medicines generated by our algorithm. We will also be integrating a **chat bot using an NLP Algorithm** which will communicate in a user-friendly manner and deliver the expected knowledge about hospitals and drugs to treat the most common infections/diseases present in today’s era. The resemblance of our website will be similar to that of a local medical facility with options to contact and schedule appointments hence understanding the concept of **data visualization** in drugs with their usefulness. The dataset being used will contain over 80000 reviews to determine the best course of action and will dissipate needless commercial reviews and replace them by reviews by ordinary people which are known for saying the objective truth regarding the product despite their marketing, which is very common for most products on various e-commerce sites. Hence the project will be focusing on some important modules in this field.

The tools that we intend to use include **Jupyter Notebook, IBM Watson Assistant, Python Anywhere, Front End Web Tools and Anvil** to deploy our Project on a suitable web server.