**Abstract**

This project focuses on leveraging Natural Language Processing (NLP) techniques to enhance clinical decision support systems and develop text classification models for the analysis of medical and non-medical prescriptions. The main objective is to improve the accuracy and efficiency of clinical decision-making processes by employing NLP algorithms to analyze medical prescriptions.

The project encompasses several key objectives. First, NLP techniques will be applied to extract meaningful information from medical prescriptions. Second, a clinical decision support system will be developed, utilizing NLP algorithms to assist healthcare professionals in making accurate diagnoses and treatment decisions. Third, text classification models will be built to effectively distinguish between medical and non-medical prescriptions. Lastly, the performance of the developed models will be thoroughly evaluated to assess their effectiveness in enhancing prescription analysis.

The project's scope entails utilizing relevant research papers on Clinical Decision Support and Text Classification of Medical and Non-Medical Prescriptions as foundational knowledge. Primarily, the project involves data analysis, implementation of NLP algorithms, and model development. However, the deployment of the system and extensive clinical trials are excluded.

The deliverables of the project consist of a comprehensive analysis of the attached research papers, along with a literature review on NLP techniques in clinical decision support and text classification of medical prescriptions. Additionally, NLP algorithms will be developed to extract pertinent information from medical prescriptions, and text classification models will be trained using suitable datasets. An evaluation report will be generated, comparing the performance of the developed models and assessing their effectiveness based on appropriate metrics.

This project has the potential to significantly enhance clinical decision-making processes by utilizing NLP in prescription analysis.

**Background:**

(Literature Review)

**Aim:**

The aim of this project is to leverage Natural Language Processing (NLP) techniques to enhance clinical decision support systems and improve prescription analysis in medical settings.

**Objectives:**

To apply NLP techniques to extract relevant and meaningful information from medical prescriptions.

* To conduct a comprehensive analysis of existing research papers and literature on NLP techniques in clinical decision support and text classification of medical prescriptions.
* To develop NLP algorithms that effectively extract pertinent information from medical prescriptions.
* To develop a clinical decision support system using NLP algorithms that assists healthcare professionals in making accurate diagnoses and treatment decisions.
* To evaluate the performance and effectiveness of the developed models in improving prescription analysis.
* To generate an evaluation report comparing the performance of the developed models, utilizing appropriate metrics for assessing their effectiveness.

These objectives will guide the structure of the project and serve as measurable milestones towards achieving the broader aim of enhancing clinical decision support systems and advancing prescription analysis using NLP techniques.

* Validating whether the dataset has the medical Prescription or not [If there is no Dataset]
* To build text classification models capable of distinguishing between medical and non-medical prescriptions. [Identify the Data related to Non-Medical Prescription ]
* To train text classification models using suitable datasets for accurate differentiation between medical and non-medical prescriptions.