



Health Research

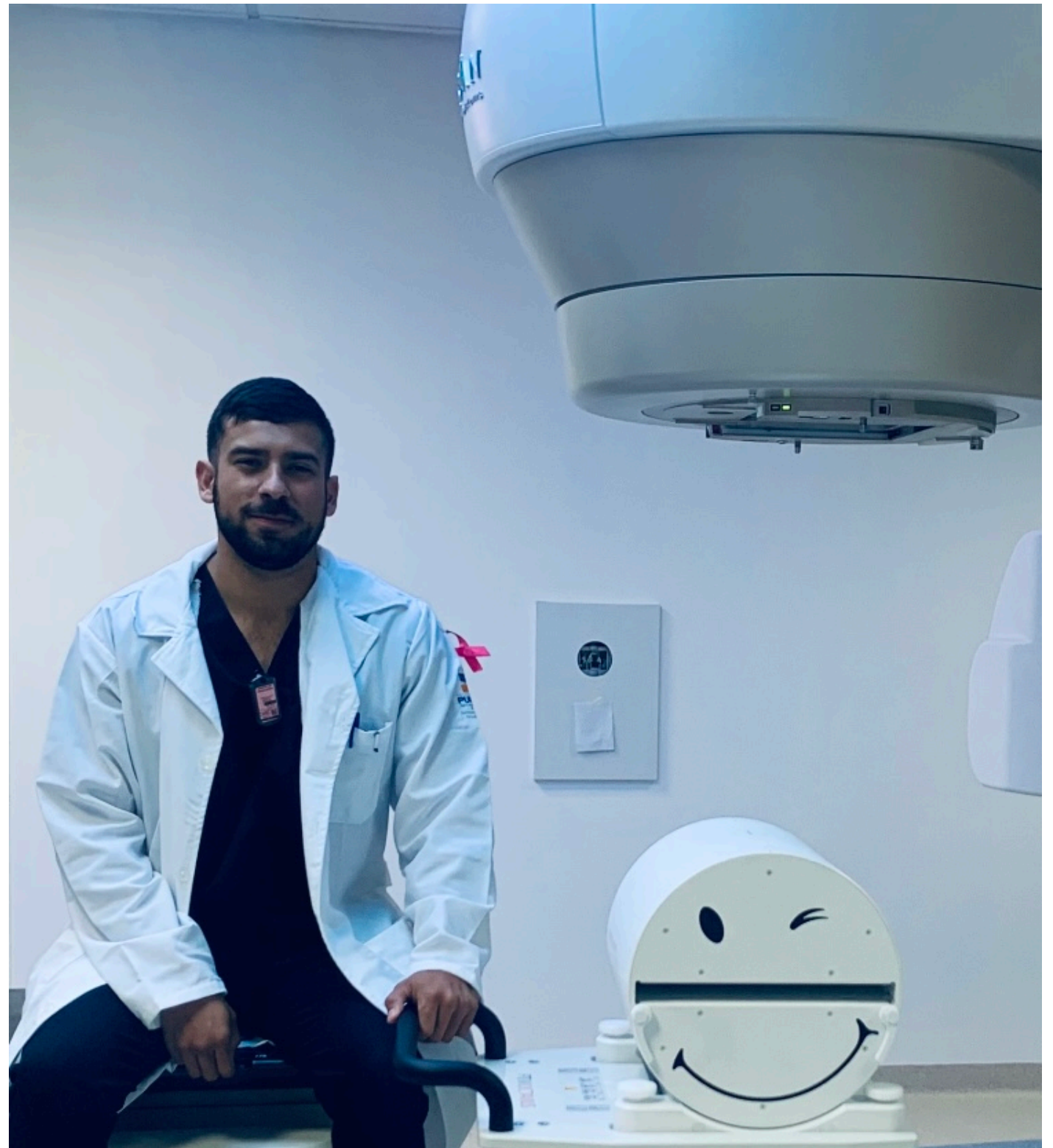
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abc FARMA





Problem Description:

ABC Pharma Company is confronted with a challenge in comprehending drug persistency as per physician prescriptions. To address this challenge, the company aims to automate the identification process.

Objective:

The primary objective is to construct a classification model for drug persistency identification. The successful implementation of this model will automate the identification of drug persistency for ABC Pharma Company, thereby facilitating a more comprehensive understanding of drug persistency as per physician prescriptions.

Data Understanding:

A concise summary of the data received

- Data shape: 3424 rows x 69 columns
- Categorical variables: 67
- Numerical variables: 2

Data Issues:

Despite the generally sound quality of the dataset, a few issues have been identified:

- Number of Missing Values: 0
- **Outliers:** Outliers are present in the numerical columns, specifically in Dex_Freq_During_Rx and Count_Of_Risk.

- **Skewed Data:** The numerical columns exhibit positively skewed data.

Bucket	Variable	Variable Description			
Unique Row Id	Patient ID	Unique ID of each patient			
Target Variable	Persistency_Flag	Flag indicating if a patient was persistent or not			
Demographics	Age	Age of the patient during their therapy			
	Race	Race of the patient from the patient table			
	Region	Region of the patient from the patient table			
	Ethnicity	Ethnicity of the patient from the patient table			
	Gender	Gender of the patient from the patient table			
	IDN Indicator	Flag indicating patients mapped to IDN			
Provider Attributes	NTM - Physician Specialty	Specialty of the HCP that prescribed the NTM Rx			
Clinical Factors	NTM - T-Score	T Score of the patient at the time of the NTM Rx (within 2 years prior from rxdate)			
	Change in T Score	Change in Tscore before starting with any therapy and after receiving therapy (Worsened, Remained Same, Improved, Unknown)			
	NTM - Risk Segment	Risk Segment of the patient at the time of the NTM Rx (within 2 years days prior from rxdate)			
	Change in Risk Segment	Change in Risk Segment before starting with any therapy and after receiving therapy (Worsened, Remained Same, Improved, Unknown)			
	NTM - Multiple Risk Factors	Flag indicating if patient falls under multiple risk category (having more than 1 risk) at the time of the NTM Rx (within 365 days prior from rxdate)			
	NTM - DEXA Scan Frequency	Number of DEXA scans taken prior to the first NTM Rx date (within 365 days prior from rxdate)			
	NTM - DEXA Scan Recency	Flag indicating the presence of DEXA Scan before the NTM Rx (within 2 years prior from rxdate or between their first Rx and Switched Rx; whichever is smaller and applicable)			
	Dexa During Therapy	Flag indicating if the patient had a DEXA Scan during their first continuous therapy			
	NTM - Fragility Fracture Recency	Flag indicating if the patient had a recent fragility fracture (within 365 days prior from rxdate)			
	Fragility Fracture During Therapy	Flag indicating if the patient had fragility fracture during their first continuous therapy			
	NTM - Glucocorticoid Recency	Flag indicating usage of Glucocorticoids (>=7.5mg strength) in the one year look-back from the first NTM Rx			
	Glucocorticoid Usage During Therapy	Flag indicating if the patient had a Glucocorticoid usage during the first continuous therapy			
Disease/Treatment Factor	NTM - Injectable Experience	Flag indicating any injectable drug usage in the recent 12 months before the NTM OP Rx			
	NTM - Risk Factors	Risk Factors that the patient is falling into. For chronic Risk Factors complete lookback to be applied and for non-chronic Risk Factors, one year lookback from the date of first OP Rx			
	NTM - Comorbidity	Comorbidities are divided into two main categories - Acute and chronic, based on the ICD codes. For chronic disease we are taking complete look back from the first Rx date of NTM therapy and for acute diseases, time period before the NTM OP Rx with one year lookback has been applied			
	NTM - Concomitancy	Concomitant drugs recorded prior to starting with a therapy (within 365 days prior from first rxdate)			
	Adherence	Adherence for the therapies			