**Hospital Appointment No Show predication**

**Abstract**

Hospital appointmentno show is a comment issue thatcause problems to health organization and health practices in both government and privet sector. It is effected on the hospital slot scheduling and the hospital revenue.

The predication of the patient who will not addenda their appointment or the number of the no show would help the organization in the decision making and to reduce the no show rate. Also it would help to set a plan to mange the hospital appointments.

**Question\Need**

* What is the most factor that cause the patient not attend their appointment?
* Is the patient with chronic disease like hypertension and diabetic not attending their appointment?
* Is The day of Week affected on patient attendee?
* Is the long waiting time to get the appointment affected on patient attendee?
* Is the older patient missed their appointment than elder?
* Defining the important factors that cause the patient not attending their appointment will help the health organization to deal with and reducing the no show rate.

**Data Description**

* The dataset that will be used in this project is a patient appointment data with the status of the patient as show or no show
* The source of the data is from kaggle**.**
* The data consist of 110,527 records with 13 features. Scholarship, Hypertension Diabetes, Alcoholism, Handicap, SMS\_received are the feature with value of 0 and 1.

patient ID and appointment ID is a database column that will not be included as a feature. Schedule day and appointment day is a date time type and it will be used to get an interested feature which is the weekday and the waiting time that can affected on the show or no show of the patient. The remaining features are gender, neighborhood and patient age which are interested as well and it can show a relation with the no show of the patient.

* The model will predict if the patient will show or no show in the appointment
* Date source link:<https://www.kaggle.com/joniarroba/noshowappointments>

**Tools**

* Numpy and Pandas for data manipulation.
* Scikit-learn for modeling.
* Matplotlib and Seaborn for plotting.

**MVP Goal**

The dataset has been exploring by Jubyter notebook. The goal is to answer the questions and to implement a model that predicted the status of the appointment as show or no show.

Following step applied:

* Import Libraries
* Load Data
* Some of exploratory data analysis applied
* A graph to show the Show & No Show by Gender
* A graph to show the No show cases by age.
* As model plan to apply:
* DecisionTreeClassifier
* RandomForestClassifier