Hospital Patient Survival

Health institutions constantly seek to improve their care conditions for the patients. In the current dataset, we will look at the historical data of patient survivals in a particular health care center and identify the main factors leading to high survivals. The objective of the sprint is to predict the chances of survival of the patient after a year of treatment.

Optional:

While performing the analysis, it will be worthwhile to make use of explainable AI concepts to understand the underlying factors of patient survival. In a real-life scenario, this will analysis will allow you to explain the results of the model to the decision-makers and explain the impact of certain factors that lead to high patient survivals seamlessly. It also beyond that while explaining it to the non-technical staff at the health care and explain them the prominence/impact of their work on certain functions that leads to better survival rates of the patient.

The dataset contains the patient records collected from a hospital. The "Survived\_1\_year" column is a target variable that has binary entries (0 or 1).

* Survived\_1\_year == 0, implies that the patient did not survive after 1 year of treatment
* Survived\_1\_year == 1, implies that the patient survived after 1 year of treatment

**Data Description:**

* ID\_Patient\_Care\_Situation: Care situation of a patient during treatment
* Diagnosed\_Condition: The diagnosed condition of the patient
* ID\_Patient: Patient identifier number
* Treatment\_with\_drugs: Class of drugs used during treatment
* Survived\_1\_year: If the patient survived after one year (0 means did not survive; 1 means survived)
* Patient\_Age: Age of the patient
* Patient\_Body\_Mass\_Index: A calculated value based on the patient’s weight, height, etc.
* Patient\_Smoker: If the patient was a smoker or not
* Patient\_Rural\_Urban: If the patient stayed in a Rural or Urban part of the country
* Columns A, B, C, D, E, F, Z correspond to whether a patient has such a previous health condition or not. With entry 0 corresponding to no such previous condition and 1 corresponds to having such a previous condition.
* 'Number\_of\_prev\_cond'. Corresponds to the total number of previous health conditions