Specify The Business Problem

The Thyroid gland is a vascular gland and one of the most important organs of the human body. This gland secretes two hormones which help in controlling the metabolism of the body.

The two types of Thyroid disorders are Hyperthyroidism and Hypothyroidism. When this disorder occurs in the body, they release certain types of hormones into the body which imbalances the body's metabolism. A thyroid-related Blood test is used to detect this disease but it is often blurred and noise will be present. Data cleansing methods were used to make the data primitive enough for the analytics to show the risk of patients getting this disease. Machine Learning plays a very deciding role in disease prediction. Machine Learning algorithms, SVM - support vector machine, Random Forest Classifier, XGB Classifier and ANN - Artificial Neural Networks are used to predict the patient's risk of getting thyroid disease. The web app is created to get data from users to predict the type of disease.

The thyroid gland is the butterfly-shaped gland situated at the base of the throat. It comprises two active thyroid hormones , levothyroxine(T4) and triiodothyronine (T3) , which are involved in brain function such as body temperature control, blood pressure management and heart rate regulation. Machine learning is the set of tools Utilized for the creation and evaluation of algorithms that facilitate prediction, pattern recognition, and classification .

ML is based on four steps:

1. Collecting data
2. Picking the model
3. training the model
4. testing the model