# ANALYTICS FOR HOSPITALS HEALTH-CARE DATA


## ABSTRACT:

Humanity today is suffering from one of the most dangerous pandemics in history, the Coronavirus Disease of 2019 (COVID-19). Although today there is immense advancement in the medical field with the latest technology, the COVID-19 pandemic has affected us severely. The virus is spreading rapidly, resulting in an escalation in the number of patients admitted. We propose a contextual patient classification system for better analysis of the data from the discharge summary available from the research hospital. The classification was done using the Knuth–Morris–Pratt algorithm. We have also analyzed the data of COVID-19 and non-COVID-19 patients. During the analysis, studies on the medicines, medical services and tests, pulse count, body temperature, and the overall effect of age and gender was done. The death versus survival ratio for the COVID-19 positive patients has also been studied. The classification accuracy of the contextual patient classification system achieved was 97.4%. The combination of data analysis and contextual patient classification will be helpful to all the sectors to be better prepared for any future waves of the COVID-19 pandemic. The goal is to accurately predict the Length of Stay for each patient on case by case basis so that the Hospitals can use this information for optimal resource allocation and better functioning. The length of stay is divided into 11 different classes ranging from 0-10 days to more than 100 days. The tools that we are using for data analytics is Cognos Analytics from IBM.