## ANALYTICS FOR HOSPITALS HEALTH-CARE DATA

## **ABSTRACT:-**

The recent Covid-19 pandemic has raised alarms over one of the most overlooked areas which is Heath-care Management through the use of data. While healthcare management has various use cases for using data science, patient length of stay is one critical parameter to observe and predict if one wants to improve the efficiency of the healthcare management in a hospital. The main goal is to maximize the resource utilization in hospitals be it beds, medicine, doctors or staff. This parameter helps hospitals to identify patients of high LOS-risk (patients who will stay longer) at the time of admission. Once identified, patients with high LOS risk can have their treatment plan optimized to minimize LOS and lower the chance of staff/visitor infection. Also, prior knowledge of LOS can aid in logistics such as room and bed allocation planning. 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 tool used here for data analytics is IBM Cognos Analytics.

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