ANALYTICS FOR HOSPITAL HEALTH CARE DATA

Activity 3.1

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S.No	Parameter	Description
1.	Problem Statement	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. 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.
2, .	Idea / Solution description	To accurately predict the Length of Stay for each patient on a 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.
3.	Novelty / Uniqueness	● Predicting the Length Of Stay; based on disease diagnosed lets the hospital reduce the LOS by optimizing treatment ● Classifying patients LOS used to plan the bed availability accordingly. ● Predicting LOS using disease severity, disease type, hospital department etc. ● LOS can be used to book beds in hospitals.
4.	Social Impact / Customer satisfaction	● If we can predict the length of stay the hospital management can prepare the requirements for the patient. ● The patients can easily get the things and clothes required for the stay ● The hospital management can increase the beds available with the data

5.	Business Model	**Customer selection:** ● Hospital management. ● Patients/Public ● Government ● Insurance **Value proposition:** By predicting LOS we can plan the required beds, checking the future availability of beds in hospitals, monitoring length of stay of patients.
6.	Scalability of the Solution	The solution can be used in every hospital and by patients and can take required measures for the length of stay.