

## Final Deliverables

### Web Based Analytics Using Cognos

Date	18 <sup>th</sup> November 2022
Team ID	PNT2022TMID07721
Project Name	Analytics for Hospital's Health-Care Data



**ANALYTICS FOR  
HOSPITAL'S HEALTH  
CARE DATA**

TEAM MEMBERS:

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- **SAVITHA P**

IBM Nalaiyathiran Project

Sprint 3 Dashboard 2

8 Legged Dreams • Unlike Pluto

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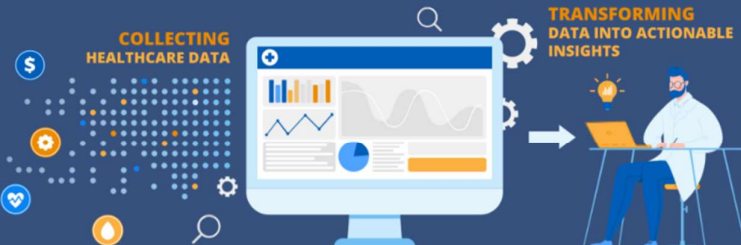
# Analytics for Hospital's Health Care Data

Being a developing country, India has gone through many issues especially during the pandemic period. The most unforgettable era for India is the second wave of the covid-19 pandemic. Data analytics in health care sector can help us to face any situations in the future


Get Started


COLLECTING HEALTHCARE DATA



TRANSFORMING DATA INTO ACTIONABLE INSIGHTS




The illustration depicts a workflow from data collection to insight generation. On the left, 'COLLECTING HEALTHCARE DATA' is shown with a network of nodes and icons for a dollar sign, heart, and flame. An arrow points to a central computer monitor displaying various charts and graphs. Another arrow points from the monitor to the right, where 'TRANSFORMING DATA INTO ACTIONABLE INSIGHTS' is shown with a person in a lab coat sitting at a desk with a laptop, a lightbulb icon, and a gear.



Design Thinking



$$P(A|B) = \frac{P(A \cap B)}{P(B)}$$



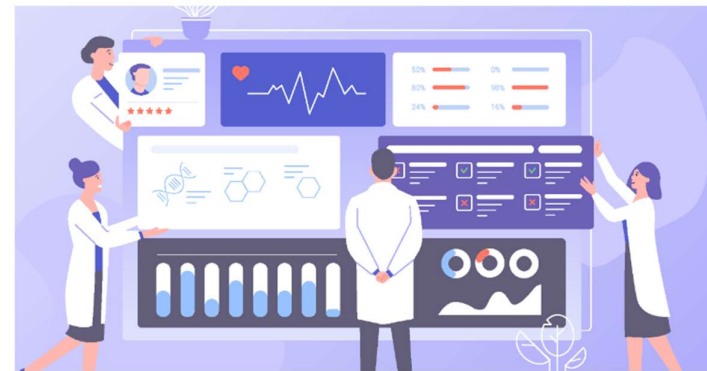
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## PROJECT IDEA

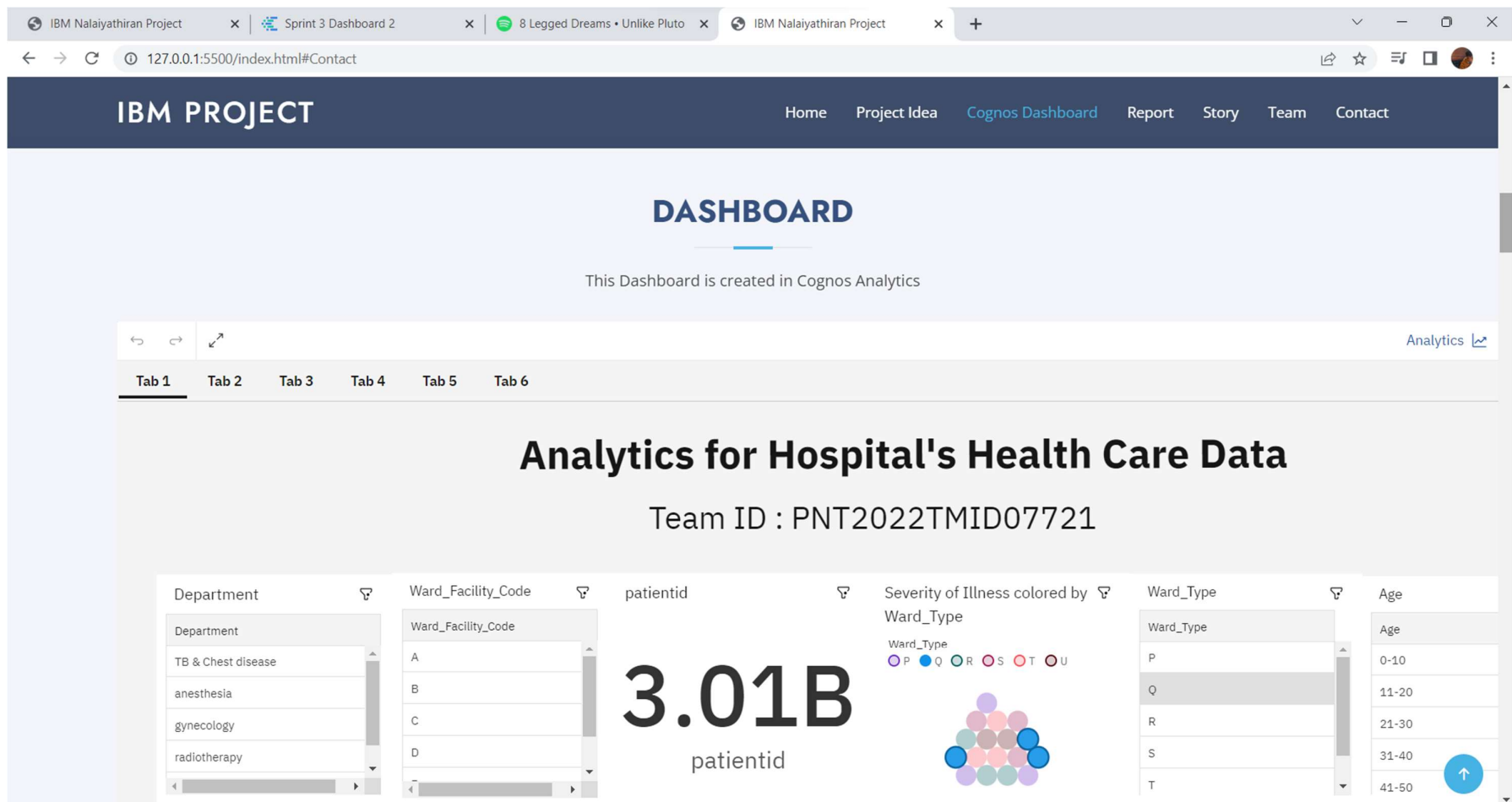
Main Idea of this Project is:

- ✔ Data Collection
- ✔ Data Cleaning
- ✔ Data Exploration
- ✔ Visualization
- ✔ Story Creation
- ✔ Prediction
- ✔ Report Creation

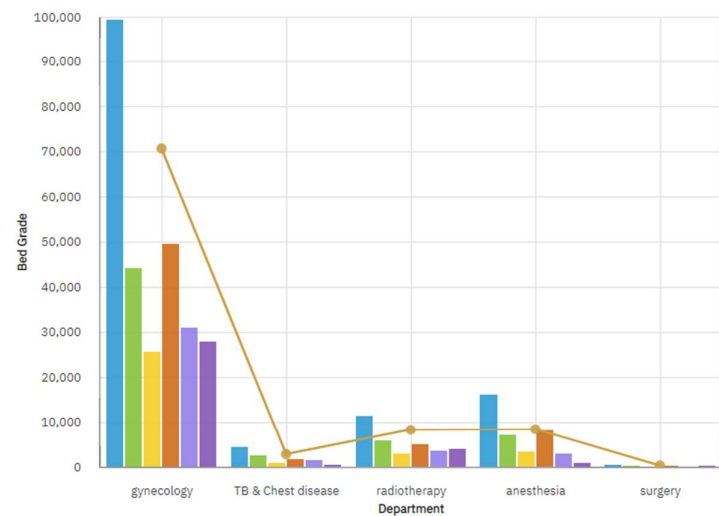


## DASHBOARD

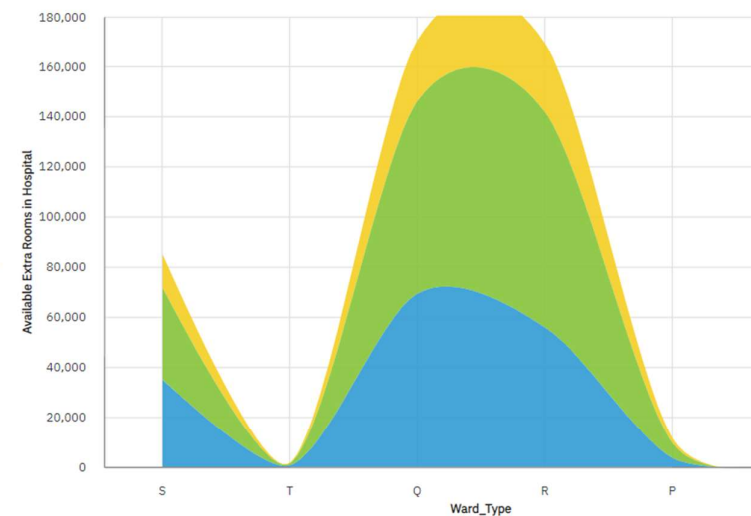


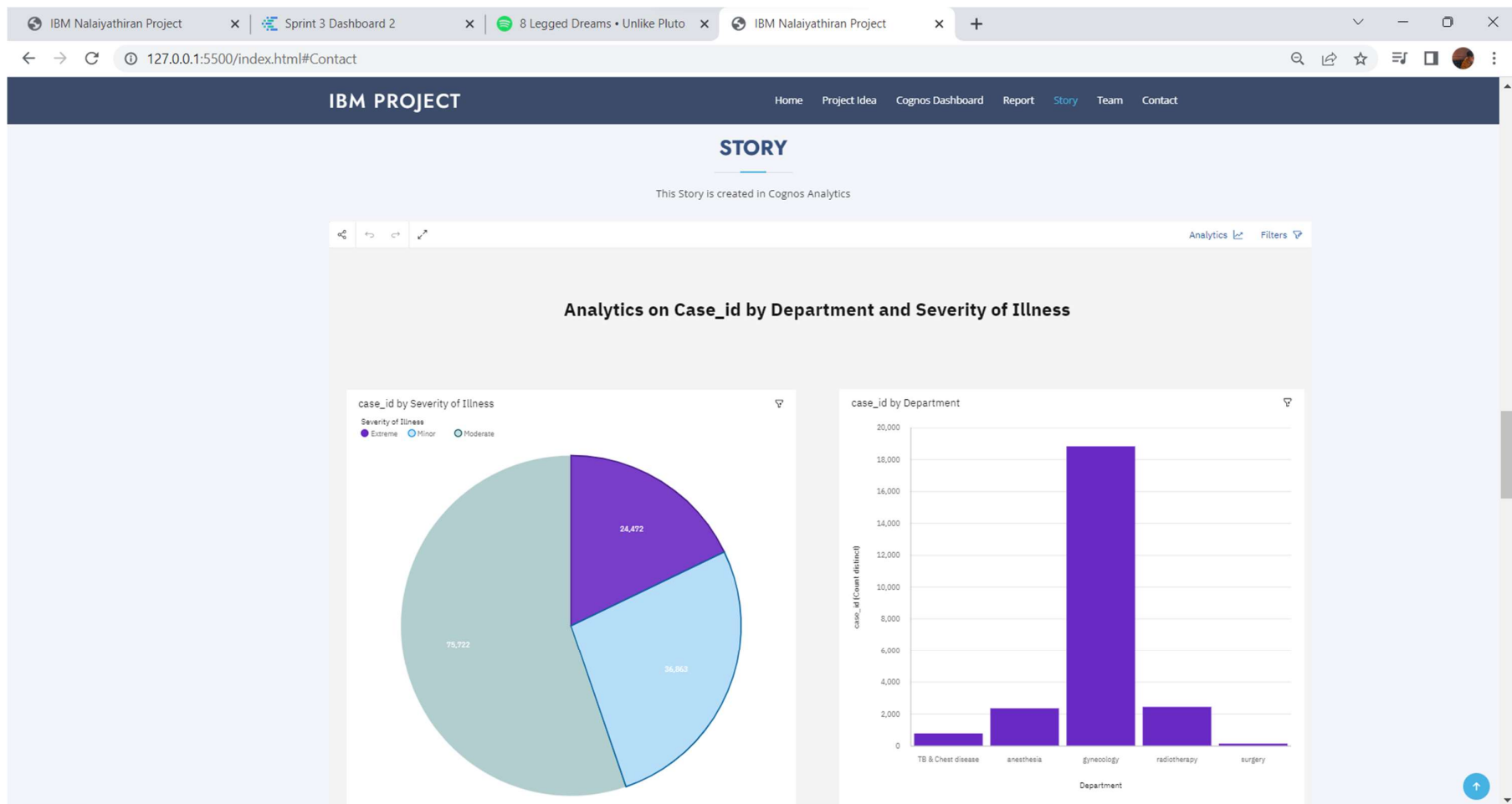


Ward\_Facility\_Code  
F D A E B C  
Line  
patientid



Type of Admission  
Emergency Trauma Urgent





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# Goal

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.

Description

## PREDICTION

This Prediction was done in google colab by using Naive Bayes Algorithm

Predit the length of stay (LoS)

Waiting for api.segment.io...

Up Arrow

## Analytics for Hospital's Health Care Data LoS Prediction Model

```
In [ ]: import numpy as np
import pandas as pd
import matplotlib.pyplot as plt
np.set_printoptions(suppress=True)
import warnings
warnings.filterwarnings('ignore')
```

### Dataset Loading

```
In [ ]: from google.colab import drive
drive.mount('/content/drive')
```

Mounted at /content/drive

```
In [ ]: #Load data
d1 = pd.read_csv('/content/drive/My Drive/Healthcare_Data/sample_sub.csv')
d2 = pd.read_csv('/content/drive/My Drive/Healthcare_Data/train_data_dictionary.csv')
test = pd.read_csv('/content/drive/My Drive/Healthcare_Data/test_data.csv')
train = pd.read_csv('/content/drive/My Drive/Healthcare_Data/train_data.csv')
```

### Data Exploration

```
In [ ]: train.head()
```

Out[ ]:

	case_id	Hospital_code	Hospital_type_code	City_Code_Hospital	Hospital_region_code	Available Extra Rooms in Hospital	Department	Ward_Type	Ward_Facility_Code	Bed Grade	patient
0	1	8	c	3	Z	3	radiotherapy	R	F	2.0	313
1	2	2	c	5	Z	2	radiotherapy	S	F	2.0	313
2	3	10	e	1	X	2	anaesthesia	S	F	2.0	313



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TEAM





Team Work is so essential for this whole project without them this project will be just few lines of unexecutable codes




Dharshan Prasath H

Team Leader

Worked on Model Creation , Cognos Analytics , Colab










Dhayalini P U

Team Member 1

Worked on Literature Survey , Delivery Plan , Technical Stack










Abisha R

Team Member 2

Worked on Idea Creation, Cognos Analytics , Documentation









Savitha P

Team member 3

Worked on Story Creation , Predictive Analysis , Colab , Cognos Analytics



🔗 How does Data analytics helps us in Hospital Data?

During Covid 19 we faced a lot of trouble because of wrong prediction analysis which was made manually , if Data Analytics was used then there will be pre prediction which can reduce the mortality rate and avoids last minute chaos

❓ Will it makes major error in prediction and Visualization

❓ Why we use IBM cognos?

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