

# Project Development Phase

## Delivery of Sprint-1

Date	29 OCT 2022
Team ID	PNT2022TMID18216
Project Name	Analytics for Hospitals' Health-Care Data

### Project Development Phase:

#### **Sprint-1:**

- Data Collection
- Data Preparation

#### **Sprint-2:**

- Data Exploration

#### **Sprint-3:**

- Dashboard Creation

#### **Sprint-4:**

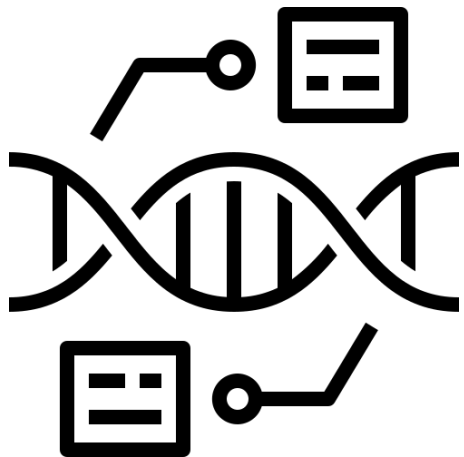
- Report Creation
- Story Creation

# Analytics For Hospital and Health-Care Data

TEAM ID: PNT2022TMID18216

## Team Members

- Selvakumar \*
- Swetha
- Aad hish
- R athnavar ma



# Sprint-1:

**Data Collection:** Download the Dataset Dataset link :

[https://drive.google.com/drive/folders/1qozDgfVw04hGS8Di\\_SFhUNdUKUdjkhRT?usp=sharing](https://drive.google.com/drive/folders/1qozDgfVw04hGS8Di_SFhUNdUKUdjkhRT?usp=sharing)

## Load the Dataset:

**Tool used:** IBM Cognos Analytics

The screenshot displays the IBM Cognos Analytics user interface. At the top, a blue navigation bar contains the text "IBM Cognos Analytics with Watson" and a "Content" dropdown menu. To the right of the navigation bar is a search bar labeled "Search content" and a user profile icon. Below the navigation bar, a status bar shows a maintenance message: "Maintenance: Scheduled maintenance completed. Click More Info for". A modal dialog box is open in the center, titled "Reading 2 files...", with "Cancel" and "Details" buttons. The main content area is titled "Content" and has tabs for "My content", "Team content", and "Samples". Below the tabs, there is a table listing content items. The table has columns for "Name", "Type", and "Last Accessed". The items listed are folders: "data\_cleaning", "data\_dashboard", "data\_exploration", "data\_module", "data\_reports", "data\_story", and "dataset". Each item has a checkbox on the left and a three-dot menu on the right. A toolbar with various icons is located above the table.

<input type="checkbox"/>	Name	Type	Last Accessed
<input type="checkbox"/>	data_cleaning	Folder	24/09/2022, 8:17 AM
<input type="checkbox"/>	data_dashboard	Folder	31/10/2022, 11:12 AM
<input type="checkbox"/>	data_exploration	Folder	21/09/2022, 9:24 AM
<input type="checkbox"/>	data_module	Folder	31/10/2022, 9:47 AM
<input type="checkbox"/>	data_reports	Folder	21/09/2022, 9:05 AM
<input type="checkbox"/>	data_story	Folder	24/09/2022, 1:48 AM
<input type="checkbox"/>	dataset	Folder	21/09/2022, 7:53 AM

# Data Preparation:

## Prepare the Dataset

IBM Cognos Analytics with Watson

hospital\_care\_data

312

Search content

?

Properties

Data module

Search

hospital\_care\_data

Navigation paths

train\_data.csv

test\_data.csv

Grid

Relationships

Custom tables

Row Id	case_id	Hospital_code	Hospital_type_code	City_Code_Hospital	Hospital_region_code	Available E...in Hospital	Department
1	1	8	c	3	Z	3	radiotherapy
2	2	2	c	5	Z	2	radiotherapy
3	3	10	e	1	X	2	anesthesia
4	4	26	b	2	Y	2	radiotherapy
5	5	26	b	2	Y	2	radiotherapy
6	6	23	a	6	X	2	anesthesia
7	7	32	f	9	Y	1	radiotherapy
8	8	23	a	6	X	4	radiotherapy
9	9	1	d	10	Y	2	gynecology
10	10	10	e	1	X	2	gynecology
11	11	22	g	9	Y	2	radiotherapy
12	12	26	b	2	Y	4	radiotherapy
13	13	16	c	3	Z	2	radiotherapy
14	14	9	d	5	Z	3	radiotherapy
15	15	6	a	6	X	4	gynecology
16	16	6	a	6	X	3	gynecology

# Null Values Cleaning Process :

The screenshot shows the 'Edit calculation' dialog in IBM Cognos Analytics. The dialog has a title bar with 'IBM Cognos Analytics with Watson' and a dropdown menu showing 'hospital\_care\_data'. The main area is divided into two sections: 'Components' on the left and 'Expression' on the right. The 'Name' field is set to 'City\_Code\_Patient'. The 'Expression' field contains the following SQL code:

```
1 IF ( City_Code_Patient is missing )
2 THEN ( median (City_Code_Patient ))
3 ELSE ( City_Code_Patient )
```

Below the expression field, there is a 'Validation Results' section that displays a green checkmark and the text 'The expression is valid.' At the bottom of the dialog, there are 'Cancel' and 'OK' buttons.

IBM Cognos Analytics with Watson hospital\_care\_data 312 Search content

Edit calculation

Name City\_Code\_Patient

Components

Search

- between
- case
- contains
- currentMeasure
- default
- distinct
- else
- end
- ends with
- escape
- for
- for all
- for any

Expression

```
1 IF ( City_Code_Patient is missing )
2 THEN ( median (City_Code_Patient ))
3 ELSE ( City_Code_Patient )
```

Validation Results

✓ The expression is valid.

Cancel OK

IBM Cognos Analytics with Watson

hospital\_care\_data

312

Search content

?

🔔

👤

Edit calculation

NameBed Grade

Components

🔍 Search

▶ Operators

▶ Summaries

▶ Constants

▼ Constructs

# if then else

# in\_range

# search case

# simple case

▶ Business Dat...e Functions

▶ Period Predicates

▶ Vendor Specific Functions

▶ Common Functions

▶ Macro Functions

Expression

1 IF ( Bed\_Grade is missing)

2 THEN (median (Bed\_Grade))

3 ELSE(Bed\_Grade )

Validate

Validation Results

✔ The expression is valid.

Cancel

OK

Data module

Search

train\_data.csv

# Row Id

# case\_id

# Hospital\_code

abc Hospital...pe\_code

📍 City\_Cod...Hospital

📍 Hospital...ion\_code

📄 Available...Hospital

abc Department

abc Ward\_Type

abc Ward\_Fa...ty\_Code

📄 Bed Grade

📄 patientid

**📍 City\_Code\_Patient**

abc Type of Admission

abc Severity of Illness

📄 Visitors ...h Patient

abc Age

📄 Admissio...Deposit

abc Stay

test\_data.csv

Grid

Relationships

Custom tables

ent	Ward_Type	Ward_Facility_Code	Bed Grade	patientid	City_Code_Patient	Type of Admission	Severity of Illness	Vis
apy	R	F	2	31397	7	Emergency	Extreme	
apy	S	F	2	31397	7	Trauma	Extreme	
ia	S	E	2	31397	7	Trauma	Extreme	
apy	R	D	2	31397	7	Trauma	Extreme	
apy	S	D	2	31397	7	Trauma	Extreme	
ia	S	F	2	31397	7	Trauma	Extreme	
apy	S	B	3	31397	7	Emergency	Extreme	
apy	Q	F	3	31397	7	Trauma	Extreme	
gy	R	B	4	31397	7	Trauma	Extreme	
gy	S	E	3	31397	7	Trauma	Extreme	
apy	S	B	2	31397	7	Urgent	Extreme	
apy	R	D	1	31397	7	Urgent	Extreme	
apy	R	A	3	31397	7	Emergency	Extreme	
apy	S	F	3	31397	7	Urgent	Extreme	
gy	Q	F	3	63418	8	Emergency	Extreme	
gy	Q	F	3	63418	8	Emergency	Extreme	

# Hospital Data :

IBM Cognos Analytics with Watson

hospital\_care\_data

312

Search content

?

Properties

Data module

Search

train\_data.csv

# Row Id

# case\_id

# Hospital\_code

abc Hospital...pe\_code

City\_Cod...Hospital

Hospital...ion\_code

Available...Hospital

abc Department

abc Ward\_Type

abc Ward\_Fa...ty\_Code

Bed Grade

patientid

City\_Code\_Patient

abc Type of Admission

abc Severity of Illness

Visitors ...h Patient

abc Age

Admissio...Deposit

abc Stay

test\_data.csv

Grid

Relationships

Custom tables

Row Id

case\_id

Hospital\_code

Hospital\_type\_code

City\_Code\_Hospital

Hospital\_region\_code

Available E...in Hospital

Department

1

1

8

c

3

Z

3

radiotherapy

2

2

2

c

5

Z

2

radiotherapy

3

3

10

e

1

X

2

anesthesia

4

4

26

b

2

Y

2

radiotherapy

5

5

26

b

2

Y

2

radiotherapy

6

6

23

a

6

X

2

anesthesia

7

7

32

f

9

Y

1

radiotherapy

8

8

23

a

6

X

4

radiotherapy

9

9

1

d

10

Y

2

gynecology

10

10

10

e

1

X

2

gynecology

11

11

22

g

9

Y

2

radiotherapy

12

12

26

b

2

Y

4

radiotherapy

13

13

16

c

3

Z

2

radiotherapy

14

14

9

d

5

Z

3

radiotherapy

15

15

6

a

6

X

4

gynecology

16

16

6

a

6

X

3

gynecology



Data ...dule

Search

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C...

H...

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abc ...

abc ...

B...

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C...

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V...

abc Age

A...

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Grid

Relationships

Custom tables

Grade	patientid	City_Code_Patient	Type of Admission	Severity of Illness	Visitors with Patient	Age	Admission_Deposit	Stay
	31397	7	Emergency	Extreme	2	51-60	4911	0-10
	31397	7	Trauma	Extreme	2	51-60	5954	41-50
	31397	7	Trauma	Extreme	2	51-60	4745	31-40
	31397	7	Trauma	Extreme	2	51-60	7272	41-50
	31397	7	Trauma	Extreme	2	51-60	5558	41-50
	31397	7	Trauma	Extreme	2	51-60	4449	11-20
	31397	7	Emergency	Extreme	2	51-60	6167	0-10
	31397	7	Trauma	Extreme	2	51-60	5571	41-50
	31397	7	Trauma	Extreme	2	51-60	7223	51-60
	31397	7	Trauma	Extreme	2	51-60	6056	31-40
	31397	7	Urgent	Extreme	2	51-60	5797	21-30
	31397	7	Urgent	Extreme	2	51-60	5993	11-20
	31397	7	Emergency	Extreme	2	51-60	5141	0-10
	31397	7	Urgent	Extreme	2	51-60	8477	21-30
	63418	8	Emergency	Extreme	2	71-80	2685	0-10
	63418	8	Emergency	Extreme	2	71-80	9398	0-10

# Prepared data link :

[https://us3.ca.analytics.ibm.com/bi/?perspective=ca-modeller&pathRef=.my\\_folders%2Fdata\\_module%2Fhospital\\_care\\_data](https://us3.ca.analytics.ibm.com/bi/?perspective=ca-modeller&pathRef=.my_folders%2Fdata_module%2Fhospital_care_data)

