

# Project Development Phase

## Delivery of Sprint-1

Date	9 NOV,2022
Team ID	PNT2022TMID23028
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:

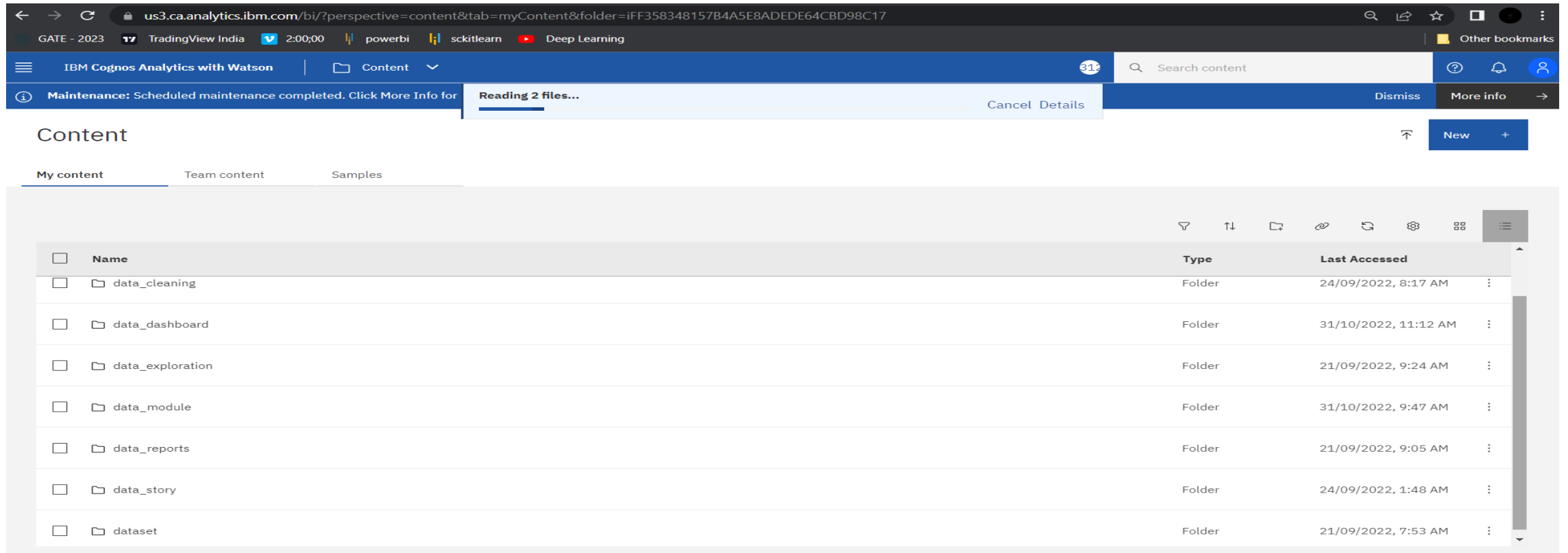
- Report Creation
- Story Creation

# Sprint-1:

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

## Load the Dataset:

**Tool used:** IBM Cognos Analytics



The screenshot displays the IBM Cognos Analytics web interface. The browser address bar shows the URL: `us3.ca.analytics.ibm.com/bi/?perspective=content&tab=myContent&folder=IFF358348157B4A5E8ADEDE64CBD98C17`. The page header includes the IBM Cognos Analytics logo and a search bar. A notification banner at the top indicates "Maintenance: Scheduled maintenance completed. Click More Info for details." Below this, a progress bar shows "Reading 2 files..." with "Cancel" and "Details" buttons. The main content area is titled "Content" and features tabs for "My content", "Team content", and "Samples". Under "My content", a list of folders is displayed with columns for "Name", "Type", and "Last Accessed".

<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

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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 'Components' and 'Expression' sections. The 'Components' section on the left contains a search bar and a list of functions: between, case, contains, currentMeasure, default, distinct, else, end, ends with, escape, for, for all, and for any. The 'Expression' section on the right contains a text area with the following SQL-like expression:

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

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

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

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hospital\_care\_data

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Search content

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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 :

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hospital\_care\_data

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Search content

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📄

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 + ⌚									
<div> <div> <div>Grid</div> <div>Relationships</div> <div>Custom tables</div> </div> </div>									
↑↓	I 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