

# Sprint-1:

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

[https://drive.google.com/drive/folders/1qozDgfVw04hGS8Di\\_SFhUNdUKUdjkhT?usp=sharing](https://drive.google.com/drive/folders/1qozDgfVw04hGS8Di_SFhUNdUKUdjkhT?usp=sharing)

## 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 top navigation bar includes the IBM Cognos Analytics logo, a search bar, and a user profile icon. A blue banner at the top indicates "Maintenance: Scheduled maintenance completed. Click More Info for details." Below this, a "Reading 2 files..." progress bar is visible. The main content area is titled "Content" and shows a list of folders under the "My content" tab. The folders are listed in a table with columns for Name, Type, and Last Accessed.

| Name             | Type   | Last Accessed        |
|------------------|--------|----------------------|
| data_cleaning    | Folder | 24/09/2022, 8:17 AM  |
| data_dashboard   | Folder | 31/10/2022, 11:12 AM |
| data_exploration | Folder | 21/09/2022, 9:24 AM  |
| data_module      | Folder | 31/10/2022, 9:47 AM  |
| data_reports     | Folder | 21/09/2022, 9:05 AM  |
| data_story       | Folder | 24/09/2022, 1:48 AM  |
| 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

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▶ 📄 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 '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 )
```

The 'Components' panel on the left lists various functions and operators, including 'between', 'case', 'contains', 'currentMeasure', 'default', 'distinct', 'else', 'end', 'ends with', 'escape', 'for', 'for all', and 'for any'. The 'Validation Results' section at the bottom indicates that the expression is valid.

Cancel OK

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312

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Edit calculation

NameBed Grade

Components

Expression

🔍 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

1 IF ( Bed\_Grade is missing)

2 THEN (median (Bed\_Grade))

3 ELSE(Bed\_Grade )

Validate

Validation Results

✔ The expression is valid.

Cancel

OK

test\_data.csv

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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312

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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 |
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|    | 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   |



# 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)

