

Project Development Phase

Delivery of Sprint-1

Date	29 OCT 2022
Team ID	PNT2022TMID39771
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:

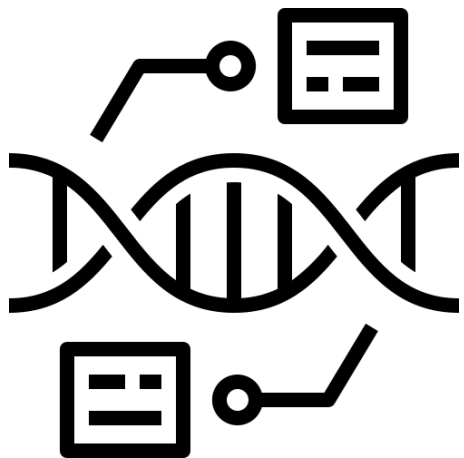
- Report Creation
- Story Creation

Analytics For Hospital and Health-Care Data

TEAM ID: PNT2022TMID39771

Team Members

- Tejeswini *
- Aamina
- Shajida
- Surekha



Sprint-1:

Data Collection: Download the Dataset Dataset link :

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 includes the text 'IBM Cognos Analytics with Watson', a 'Content' dropdown menu, a search bar labeled 'Search content', and user profile icons. Below the navigation bar, a status bar shows a maintenance message: 'Maintenance: Scheduled maintenance completed. Click More Info for'. A modal dialog is open in the center, titled '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'. Below the tabs, a table lists the contents of the library. The table has columns for 'Name', 'Type', and 'Last Accessed'. The listed items are all folders: 'data_cleaning', 'data_dashboard', 'data_exploration', 'data_module', 'data_reports', 'data_story', and 'dataset'. Each row includes a checkbox on the left and a three-dot menu icon on the right. A toolbar with various icons is visible 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

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 :

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

tr...SV

R...

c...

H...

abc H...

C...

H...

A...

abc D...

abc ...

abc ...

B...

p...

C...

abc T...

abc S...

V...

abc Age

A...

abc Sta

te...SV

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

