

Project Development Phase

Delivery of Sprint-1

Date	29 OCT 2022
Team ID	PNT2022TMID39095
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'S HEALTH – CARE DATA

PROJECT CONTRIBUTORS

NITHYA S
SARANYA N
ABARNA K
AISHWARYA J



TEAM ID : PNT2022TMID39095

Sprint-1:

Data Collection: Download the Dataset Dataset link :

https://drive.google.com/drive/folders/1qozDgfVw04hGS8Di_SFhUNdUKUdjkhT?usp=sharing

Load the Dataset:

Tool used: IBM Cognos Analytics

The screenshot shows the IBM Cognos Analytics web interface. The browser address bar displays 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 notification banner at the top states: "Maintenance: Scheduled maintenance completed. Click More Info for". A progress bar indicates "Reading 2 files..." with "Cancel" and "Details" buttons. 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

▶ 📄 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

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

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
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	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

