

Project Development Phase

Delivery of Sprint-1

Date	29 OCT 2022
Team ID	PNT2022TMID50250
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

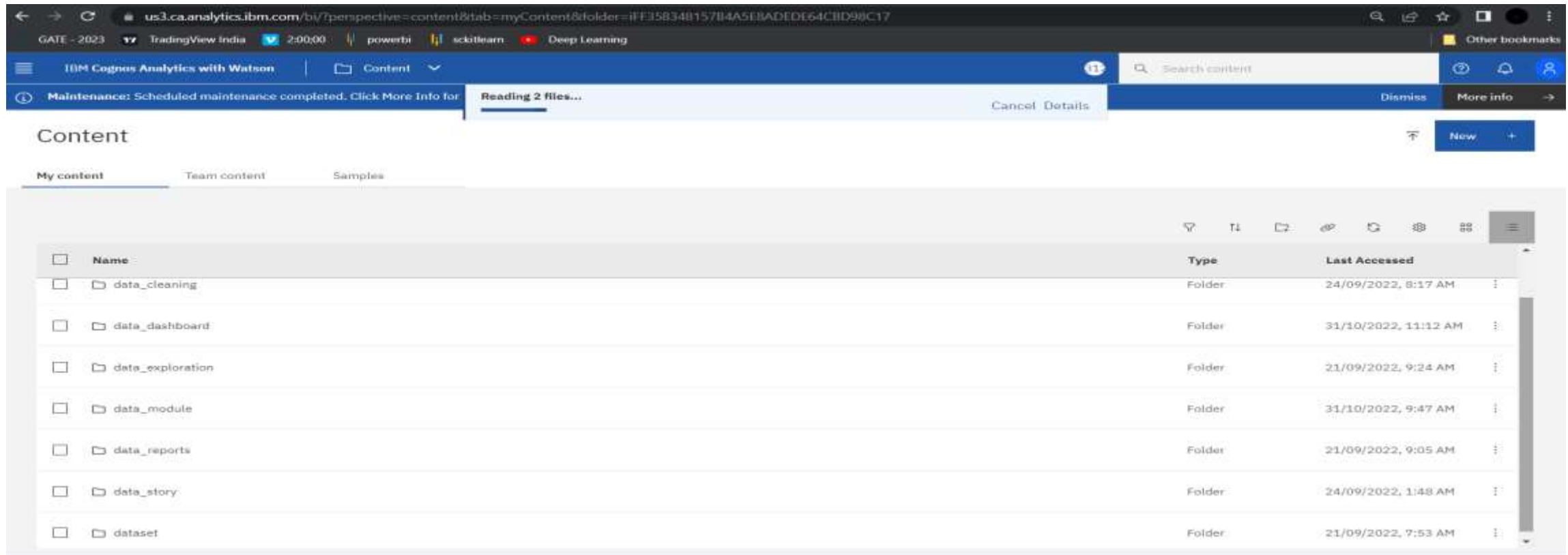
Sprint-1:

Data Collection: Download the Dataset Dataset link

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=FF35834B157B4A5EBADEDE64C8D98C17`. 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 the header, the "Content" page is displayed, showing 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

The screenshot displays the IBM Cognos Analytics interface. The top navigation bar includes the text "IBM Cognos Analytics with Watson", a dropdown menu for "hospital_care_data", a search bar with the text "Search content", and user profile icons. Below the navigation bar, a toolbar contains icons for various actions. The main workspace is divided into two panels. The left panel, titled "Data module", shows a tree view with "hospital_care_data" and "Navigation paths". Under "Navigation paths", there are two sub-items: "train_data.csv" and "test_data.csv". The right panel, titled "Grid", shows a table with 16 rows and 8 columns. The columns are: "Row Id", "case_id", "Hospital_code", "Hospital_type_code", "City_Code_Hospital", "Hospital_region_code", "Available E...in Hospital", and "Department". The data is as follows:

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-like code:

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

Below the expression field, the 'Validation Results' section shows 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

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)

Validation Results

✔ The expression is valid.

Validate

24

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	
zy	R	B	4	31397	7	Trauma	Extreme	
zy	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	
zy	Q	F	3	63418	8	Emergency	Extreme	
zy	Q	F	3	63418	8	Emergency	Extreme	

Hospital Data :

IBM Cognos Analytics with Watson | hospital_care_data

Search content

Properties

Data module

Grid Relationships Custom tables

Search

train_data.csv

- # Row Id
- # case_id
- # Hospital_code
- # Hospital_type_code
- # City_Code_Hospital
- # Hospital_region_code
- # Available_E...In Hospital
- # Department
- # Ward_Type
- # Ward_Fa...ty_Code
- # Bed Grade
- # patientid
- # City_Code_Patient
- # Type of Admission
- # Severity of Illness
- # Visitors ...h Patient
- # Age
- # Admissio...Deposit
- # Stay

test_data.csv

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

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://us1.ca.analytics.ibm.com/bi/?perspective=dashboard&pathRef=.my_folders%2FProject%2FA&action=view&mode=dashboard

