

# ANALYTICS FOR HOSPITAL'S HEALTH-CARE DATA

## PROJECT DEVELOPMENT PHASE

SUBMITTED BY

Deepan .S

Surya.V

Sithika seema.S

Mathankumar.M

### PROJECT DEVELOPMENT PHASEDELIVERY OF SPRINT-1

Project Name	Analytics for Hospitals' Health-Care Data
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**PROJECT DEVELOPMENT PHASE**

<p><b>Sprint-1:</b></p> <ul style="list-style-type: none"><li>• Data Collection</li><li>• Data Preparation</li></ul> <p><b>Sprint-2:</b></p> <ul style="list-style-type: none"><li>• Data Exploration</li></ul>	<p><b><u>Sprint-3:</u></b></p> <ul style="list-style-type: none"><li>• Dashboard Creation</li></ul> <p><b><u>Sprint-4:</u></b></p> <ul style="list-style-type: none"><li>• Report Creation</li><li>• Story Creation</li></ul>
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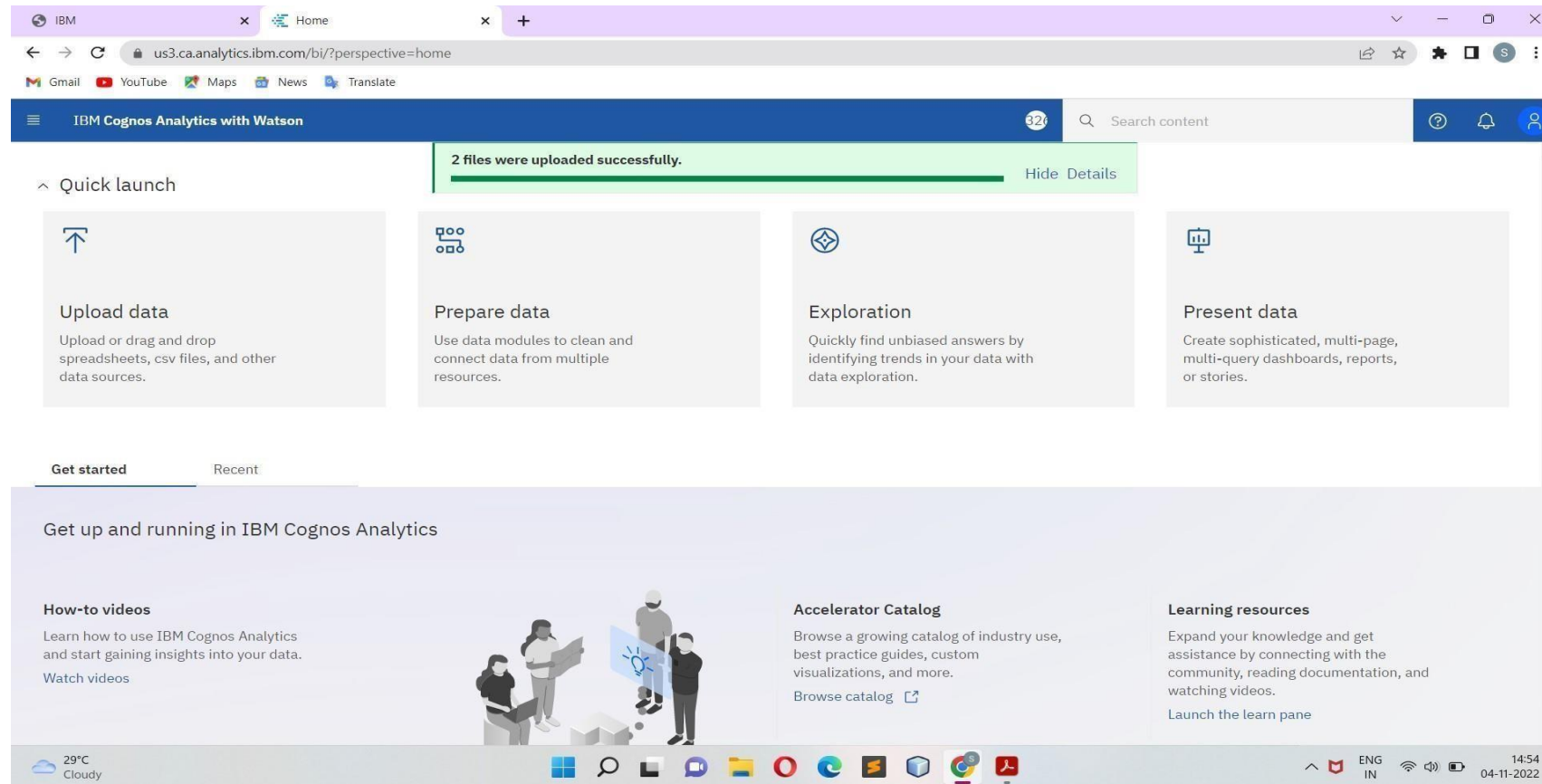
**Sprint-1:**

# 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



# Data Preparation:

Prepare the dataset

IBM Cognos Analytics with Watson

hospital\_care\_data

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Properties

Data module

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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:

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Create calculation

Name

City\_Code\_Patient

Components

Search

Operators

Summaries

Constants

Constructs

# if then else

# in\_range

# search case

# simple case

Business Da... Functions

Period Predicates

Vendor Spec... Functions

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.

☐ Calculate after aggregation

Cancel

OK

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## Create calculation

Name Bed Grade

### Components

Search

- test\_data.csv
  - # Row Id
  - # case\_id
  - # Hospital\_code
  - abc Hospit...\_code
  - City\_Co...spital
  - Hospit...\_code
  - Availabl...Hospital
  - abc Department
  - abc Ward\_Type
  - abc Ward\_...\_Code

### Expression

```
1 if(Bed_Grade is missing)
2 then(median(Bed_Grade))
3 else(Bed_Grade)
```

### Validation Results

✓ The expression is valid.

☐ Calculate after aggregation

Cancel

OK

Data module

# case\_id

# Hospital\_code

abc Hospital\_type\_code

City\_Code\_Hospital

Hospital...ion\_code

Available... Hospital

abc Department

abc Ward\_Type

abc Ward\_Facility\_Code

Bed Grade

patientid

City\_Code\_Patient

abc Type of Admission

abc Severity of Illness

Visitors ...h Patient

abc Age

Admission Deposit

Bed Grade	Row Id	case_id	Hospital_code	Hospital_type_code	City_Code_Hospital	Hospital_region_c
2	1	318439	21	c	3	Z
2	2	318440	29	a	4	X
4	3	318441	26	b	2	Y
2	4	318442	6	a	6	X
2	5	318443	28	b	11	X
2	6	318444	23	a	6	X
2	7	318445	26	b	2	Y
3	8	318446	25	e	1	X
3	9	318447	23	a	6	X
4	10	318448	23	a	6	X
2	11	318449	10	e	1	X
3	12	318450	4	a	4	X
3	13	318451	16	c	3	Z

Hospital Data:

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Data module

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🔍 Search

# case\_id

# Hospital\_code

abc Hospital\_type\_code

📍 City\_Code\_Hospital

📍 Hospital...ion\_code

📄 Available... Hospital

abc Department

abc Ward\_Type

abc Ward\_Facility\_Code

📄 Bed Grade

📄 patientid

📍 City\_Code\_Patient

abc Type of Admission

abc Severity of Illness

📄 Visitors ...h Patient

abc Age

Admission Deposit

📄 Grid

🔗 Relationships

📄 Custom tables

↕	Bed Grade	patientid	City_Code_Patient	Type of Admission	Severity of Illness	Visitors with Patient	Age
2		17006	2	Emergency	Moderate	2	71-80
2		17006	2	Trauma	Moderate	4	71-80
4		17006	2	Emergency	Moderate	3	71-80
2		17006	2	Trauma	Moderate	3	71-80
2		17006	2	Trauma	Moderate	4	71-80
2		17006	2	Trauma	Moderate	2	71-80
2		17006	2	Trauma	Moderate	2	71-80
3		95946	Null	Emergency	Moderate	2	31-40
3		95946	Null	Trauma	Moderate	2	31-40
4		95946	Null	Urgent	Moderate	2	31-40
2		95946	Null	Trauma	Moderate	2	31-40
3		95946	Null	Emergency	Moderate	6	31-40
3		95946	Null	Trauma	Moderate	3	31-40

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Properties

Data module

Search

# case\_id

# Hospital\_code

abc Hospital\_type\_code

📍 City\_Code\_Hospital

📍 Hospital...ion\_code

📄 Available... Hospital

abc Department

abc Ward\_Type

abc Ward\_Facility\_Code

📄 Bed Grade

📄 patientid

📍 City\_Code\_Patient

abc Type of Admission

abc Severity of Illness

📄 Visitors ...h Patient

abc Age

📄 Admission\_Denosit

Grid

Relationships

Custom tables

↕	Bed Grade	patientid	City_Code_Patient	Type of Admission	Severity of Illness	Visitors with Patient	Age
	2	17006	2	Emergency	Moderate	2	71-80
	2	17006	2	Trauma	Moderate	4	71-80
	4	17006	2	Emergency	Moderate	3	71-80
	2	17006	2	Trauma	Moderate	3	71-80
	2	17006	2	Trauma	Moderate	4	71-80
	2	17006	2	Trauma	Moderate	2	71-80
	2	17006	2	Trauma	Moderate	2	71-80
	3	95946	Null	Emergency	Moderate	2	31-40
	3	95946	Null	Trauma	Moderate	2	31-40
	4	95946	Null	Urgent	Moderate	2	31-40
	2	95946	Null	Trauma	Moderate	2	31-40
	3	95946	Null	Emergency	Moderate	6	31-40
	3	95946	Null	Trauma	Moderate	3	31-40

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