

Naan Mudhalvan IBM Data Analytics- Assignment 2

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1) Uploading .csv file/data into IBM Cognos

The image shows two screenshots of the IBM Cognos Analytics web interface. The top screenshot displays the home page with a green notification banner stating "HRDataset_v14.csv was uploaded successfully." Below the banner, there are four quick launch buttons: "Upload data", "Prepare data", "Exploration", and "Present data". The "Get started" tab is active, showing links to "How-to videos", "Accelerator Catalog", and "Learning resources". The bottom screenshot shows the "Select sources" dialog box. It features a search bar, a list of content items (including "HRDataset_v14.csv" with a timestamp of "5/6/2023, 12:45 PM"), and a "Filter by" sidebar with options for Type (Folders, Packages, Files, Data sets, Modules) and Modified (All, Today, Yesterday, Past week, Past month).

ap2.ca.analytics.ibm.com/bi/?perspective=home

IBM Cognos Analytics with Watson 1 item open 30 Search content

HRDataset_v14.csv was uploaded successfully. Hide Details

Quick launch

Upload data Prepare data Exploration Present data

Get started Recent

Get up and running in IBM Cognos Analytics

How-to videos Learn how to use IBM Cognos Analytics and start gaining insights into your data.

Accelerator Catalog Browse a growing catalog of industry use, best practice guides, custom

Learning resources Expand your knowledge and get assistance by connecting with the

ap2.ca.analytics.ibm.com/bi/?perspective=home

IBM Cognos Analytics with Watson 1 item open 30 Search content

Select sources

My content

Type any text to filter items in this folder

HRDataset_v14.csv 5/6/2023, 12:45 PM

Filter by

Reset filters

Type

- ☐ Folders
- ☐ Packages
- ☐ Files
- ☐ Data sets
- ☐ Modules

Modified

- ☒ All
- ☐ Today
- ☐ Yesterday
- ☐ Past week
- ☐ Past month

IBM Cognos Analytics with Watson

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New data module

Search content

Properties

Data module

Search

New data module

Navigation paths

HRDataset_v14.csv

Row Id

Employee_Name

EmpID

MarriedID

MaritalStatusID

GenderID

EmpStatusID

DeptID

PerfScoreID

FromDive...obFairID

Grid

Row Id	Employee_Name	EmpID	MarriedID	MaritalStatusID	GenderID
1	Adinolfi, Wilson K	10026	0	0	1
2	Ait Sidi, Karthikeyan	10084	1	1	1
3	Akinkuolie, Sarah	10196	1	1	0
4	Alagbe, Trina	10088	1	1	0
5	Anderson, Carol	10069	0	2	0
6	Anderson, Linda	10002	0	0	0
7	Andreola, Colby	10194	0	0	0
8	Athwal, Sam	10062	0	4	1
9	Bachiochi, Linda	10114	0	0	0
10	Bacong, Alejandro	10250	0	2	1

2) Filtering data by searching based on empID

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New data module

Search content

Properties

Data module

Search

EmpID

MarriedID

MaritalStatusID

GenderID

EmpStatusID

DeptID

PerfScoreID

FromDive...obFairID

Salary

TermID

PositionID

Position

State

Filter - EmpID

Define a range

Select individual items

Search

10001

10002

10003

10004

10005

10006

10007

10008

10009

10010

Clear all

Invert

Select 'Refresh members' in the data tree to view the effect of the filter on members in the tree.

Cancel

OK

IBM Cognos Analytics with Watson

ap2.ca.analytics.ibm.com/bi/?perspective=ca-modeller&id=1914840966_9c0e3034ca094ddb89ca1421fa65131f_sessionTemp&objRef=&tid=1914840...

Grid Relationships Custom tables

Search

EmpID
MarriedID
MaritalStatusID
GenderID
EmpStatusID
DeptID
PerfScoreID
FromDive...obFairID
Salary
Termd
PositionID
abc Position
State

Row Id	Employee_Name	EmpID	MarriedID	MaritalStatusID	GenderID
37	Candle, Calvin	10001	0	0	1

IBM Cognos Analytics with Watson

ap2.ca.analytics.ibm.com/bi/?perspective=ca-modeller&id=1914840966_9c0e3034ca094ddb89ca1421fa65131f_sessionTemp&objRef=&tid=1914840...

Grid Relationships Custom tables

Search

EmpID
MarriedID
MaritalStatusID
GenderID
EmpStatusID
DeptID
PerfScoreID
FromDive...obFairID
Salary
Termd
PositionID
abc Position
State

Row Id	Employee_Name	EmpID
1	Adinolfi, Wilson K	10026
2	Ait Sidi, Karthikeyan	10084
3	Akinkuolie, Sarah	10196
4	Alagbe,Trina	10088
5	Anderson, Carol	10069
6	Anderson, Linda	10002
7	Andreola, Colby	10194
8	Athwal, Sam	10062
9	Bachiochi, Linda	10114
10	Bacong, Alejandro	10250

Properties

General

Label: EmpID

Hide from users: ☐

Expression: [View or edit](#)

Usage: Identifier

Aggregate: Count Distinct

Data type: Integer

Represents: Default

Description: [?](#)

3) Handling missing values by filling them with mean

The screenshot shows the 'Edit calculation' window in IBM Cognos Analytics. The 'Name' field is set to 'Salary'. The 'Expression' field contains the following SQL-like code:

```
1 IF ( Salary='NA' ) THEN ( average(Salary) ) ELSE ( Salary )
```

The 'Components' panel on the left lists fields from the 'HRDataset_v14.csv' dataset, including Row Id, Emplo...Name, EmpID, MarriedID, Marita...atusID, GenderID, EmpStatusID, DeptID, PerfScoreID, and FromDi...FairID. An 'Information' pop-up is visible, explaining the 'if (condition) then (expression) else (expression)' syntax: 'Works with the then and else constructs. If defines a condition; when the if condition is true, the then expression is used. When the if condition is not true, the else expression is used. This function appears in the Top 10 Retailers for 2005 sample report in the GO Data Warehouse (analysis) package.'

This screenshot shows the same 'Edit calculation' window, but now a 'Preview' table is displayed below the expression. The preview shows the result of the calculation for two rows.

Salary
67251
65707

The 'Preview' header indicates an execution time of 0.722 seconds and includes a 'Refresh' button.

4) Created a copy of the .csv file and combining both by join and union operation, thereby creating new data modules

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Create a joined view

Table 1: HRDataset_v14.csv - Copy (1)

Table 2: HRDataset_v14.csv

Match selected columns

gementSurvey	EmpSatisfaction	SpecialProjectsCount	LastPerfor...view_Date	DaysLateLast30	Absences	Row Id
	5	0	2019-01-17	0	1	1
	3	6	2016-02-24	0	17	2
	3	0	2012-05-15	0	3	3
	5	0	2019-01-02	0	15	4

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Select items for the joined view

New table name: HRDataset_v14.csv - Copy (1) - Join (1)

Select items

- HRDataset_v14.csv - Copy (1) ☒
- HRDataset_v14.csv ☒

Row Id	Employee_Name	EmpID	MarriedID	MaritalStatusID
1	Adinolfi, Wilson K	10026	0	0
2	Ait Sidi, Karthikeyan	10084	1	1
3	Akinkuolie, Sarah	10196	1	1
4	Alagbe,Trina	10088	1	1
5	Anderson, Carol	10069	0	2
6	Anderson, Linda	10002	0	0
7	Andreola, Colby	10194	0	0
8	Athwal, Sam	10062	0	4
9	Bachiochi, Linda	10114	0	0
10	Bacong, Alejandro	10250	0	2
11	Baczinski, Rachael	10252	1	1

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IBM Cognos Analytics with Watson

New data module

Search content

Properties

Data module

Search

New data module

Navigation paths

- HRDataset_v... - Join (1)
- HRDataset_v... - Copy (1)
- HRDataset_v14.csv

Grid Relationships Custom tables

HRDataset_v14.csv - Copy (1) - Join (1)

HRDataset_v14.csv

HRDataset_v... - Copy (1)

HRDataset_v... - Join (1)

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HRDataset_v1...v - Copy (1)

HRDataset_v14.csv

To create a shortcut table, select one non-package table.

- ☐ Alias of a table
To create an alias table, select one non-package table.
- ☐ Copy of a table
To create a copy of a table, select one non-package table.
- ☐ Joined view
To create a join table, select one or two non-package tables.
- ☒ Union of tables
To create a union table, select two or more non-package tables that have the same number of columns with compatible data types.
- ☐ Intersect of tables
To create an intersect table, select two non-package tables that have the same number of columns with compatible data types.
- ☐ Except of tables
To create an except table, select two non-package tables that have the same number of columns with compatible data types.

Cancel Next

ap2.ca.analytics.ibm.com/bi/?perspective=ca-modeller&id=1914840966_9c0e3034ca094ddb89ca1421fa65131f_sessionTemp&objRef=&tid=1914840...

IBM Cognos Analytics with Watson

* New data module

Search content

Properties

Data module

Search

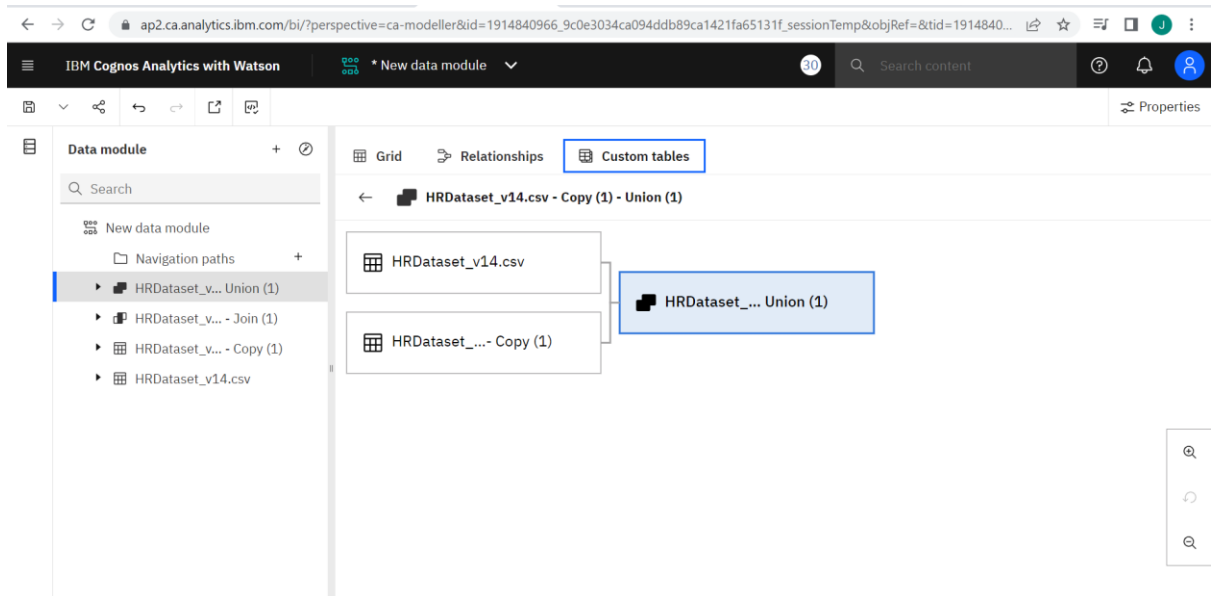
New data module

Navigation paths

- HRDataset_v... Union (1)
- HRDataset_v... - Join (1)
- HRDataset_v... - Copy (1)
- HRDataset_v14.csv

Grid Relationships Custom tables

Row Id	Employee_Name	EmpID	MarriedID	MaritalStatusID	Gen
3	Akinkuolie, Sarah	10196	1	1	0
4	Alagbe,Trina	10088	1	1	0
11	Baczinski, Rachael	10252	1	1	0
21	Bernstein, Sean	10046	0	0	1
24	Blount, Dianna	10294	0	0	0
25	Bondwell, Betsy	10267	0	0	0
26	Booth, Frank	10199	0	0	1
28	Bozzi, Charles	10175	0	0	1
29	Brill, Donna	10177	1	1	0
40	Carr, Claudia N	10082	0	0	0



ap2.ca.analytics.ibm.com/bi/?perspective=createBoard

IBM Cognos Analytics with Watson

Create dashboard

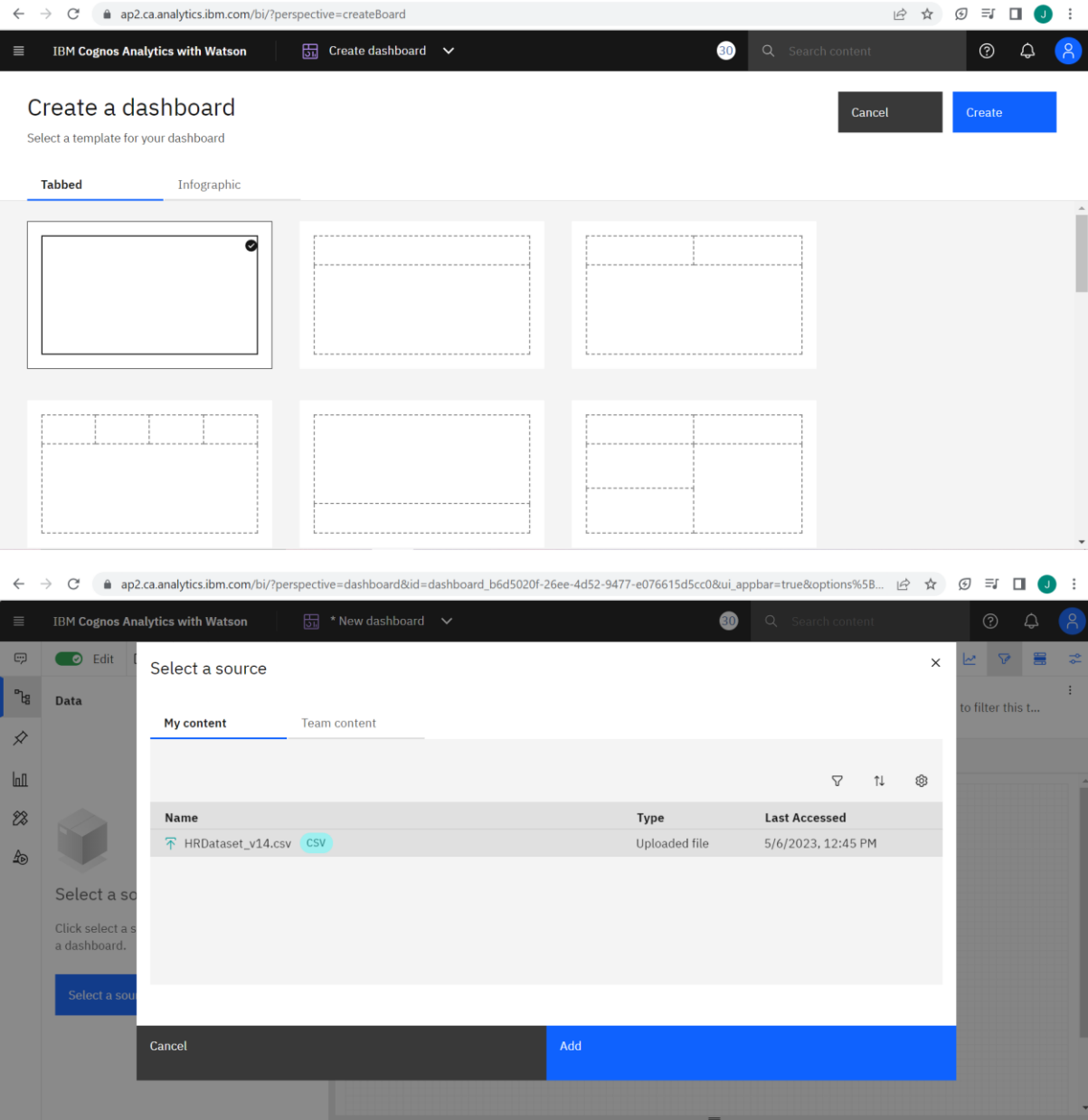
Search content

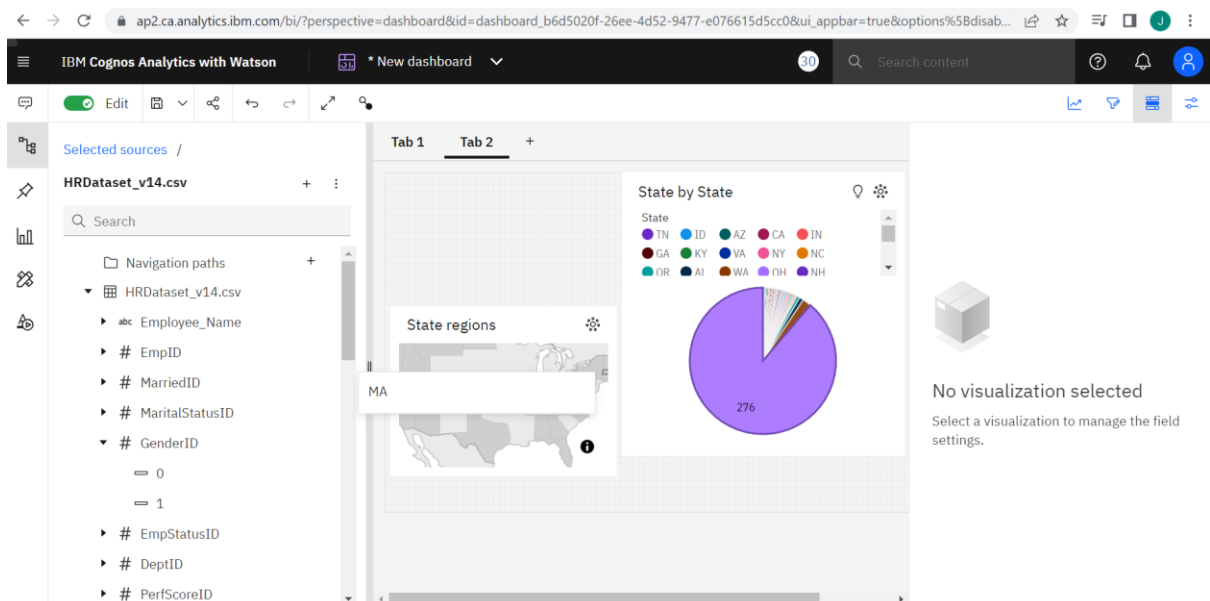
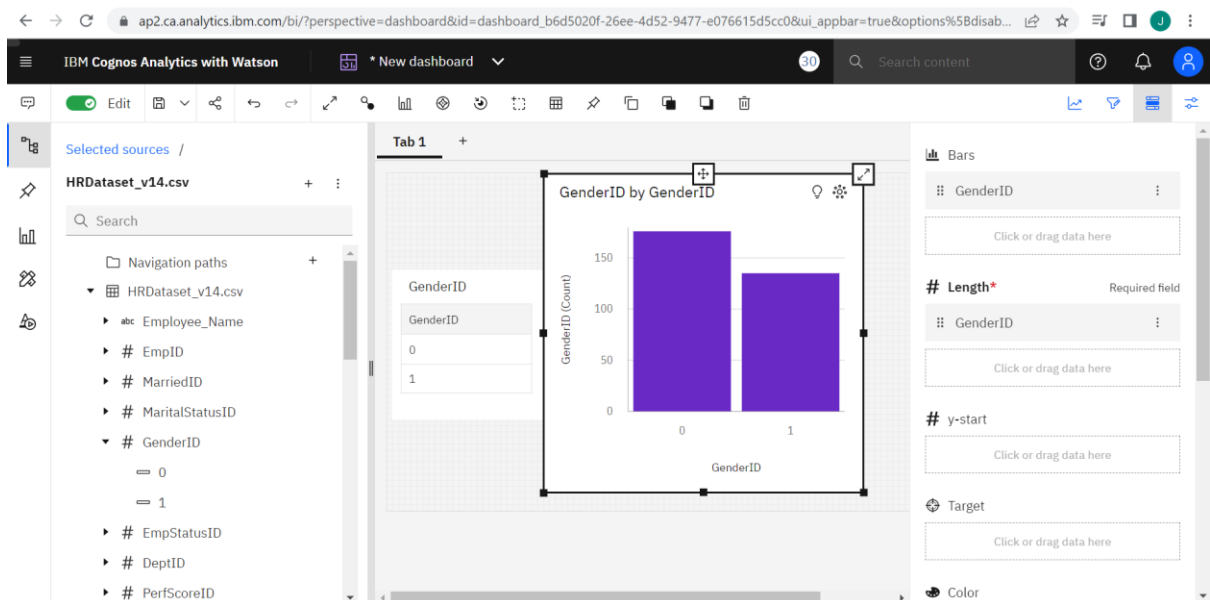
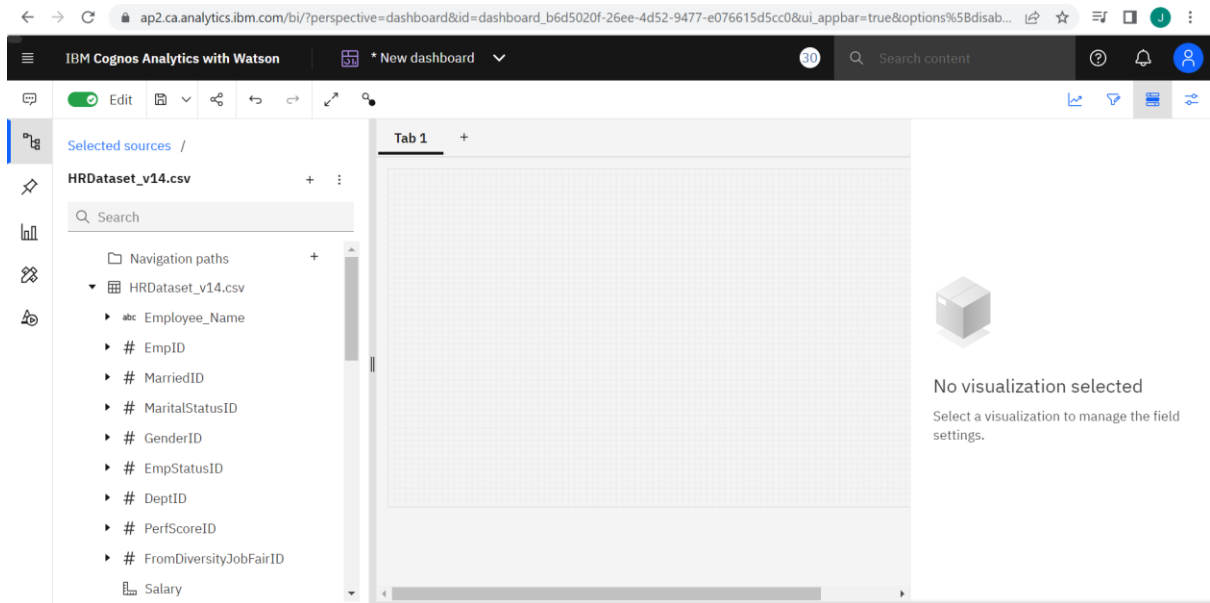
Cancel Create

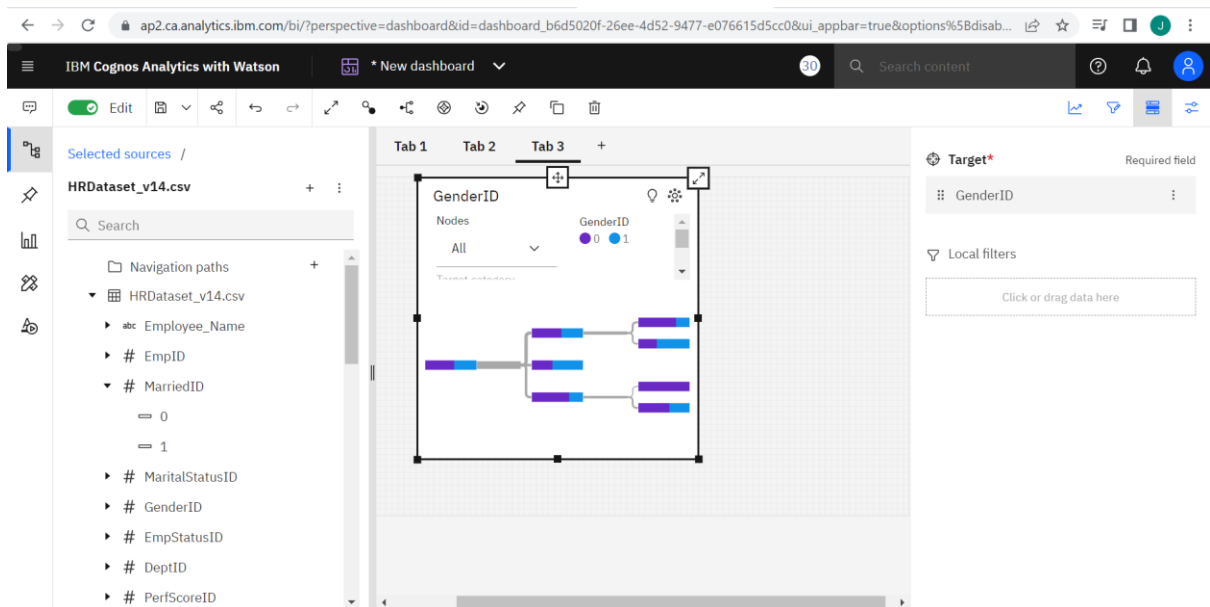
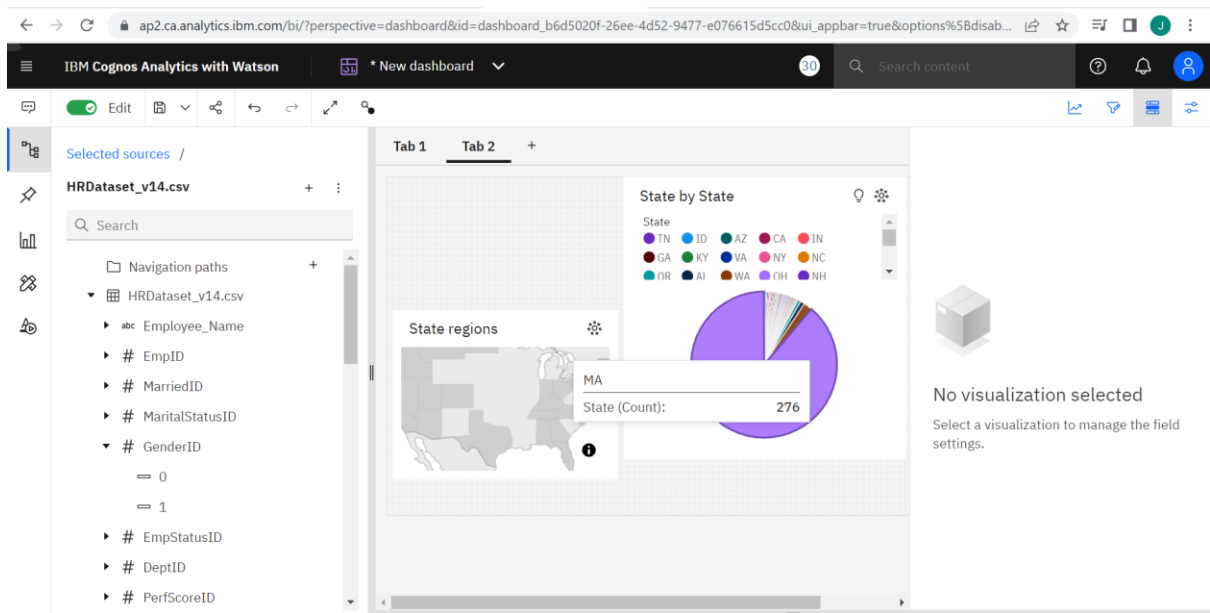
New

- Data
 - Data module
- Explore
 - Exploration
- Present
 - Dashboard
 - Report
 - Story

5)Creating a dashboard to visualize dataset







IBM Cognos Analytics with Watson

Selected sources /

HRDataset_v14.csv

Navigation paths

- HRDataset_v14.csv
 - Employee_Name
 - # EmpID
 - 10001
 - 10002
 - 10003
 - 10004
 - 10005
 - 10006
 - 10007
 - 10008

Tab 1 Tab 2 Tab 3 Tab 4 +

MaritalStatusID for MarriedID and DeptID

MaritalStatusID	0	1	Summary
1	2	1	3
2	(no value)	1	1
3	4	1	5
4	1	1	2
5	4	1	5
6	4	1	5
Summary	4	1	5

No visualization selected

Select a visualization to manage the field settings.

IBM Cognos Analytics with Watson

Visualizations

System Custom

Area Bar Box plot

Bubble Bullet Column

Crosstab Data player Decision tree

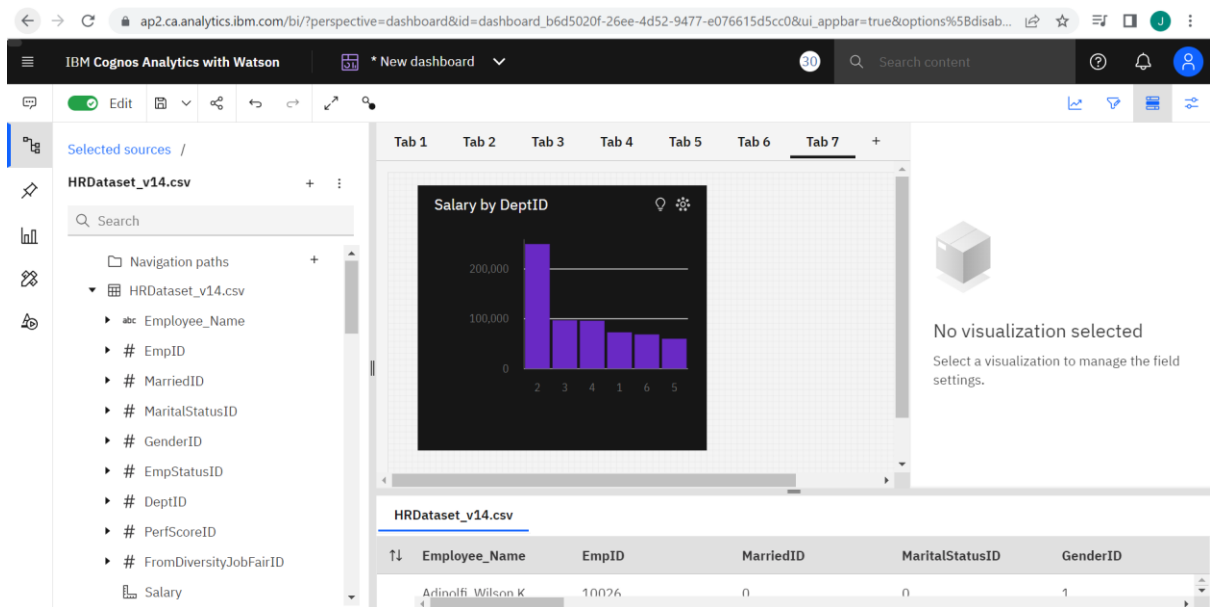
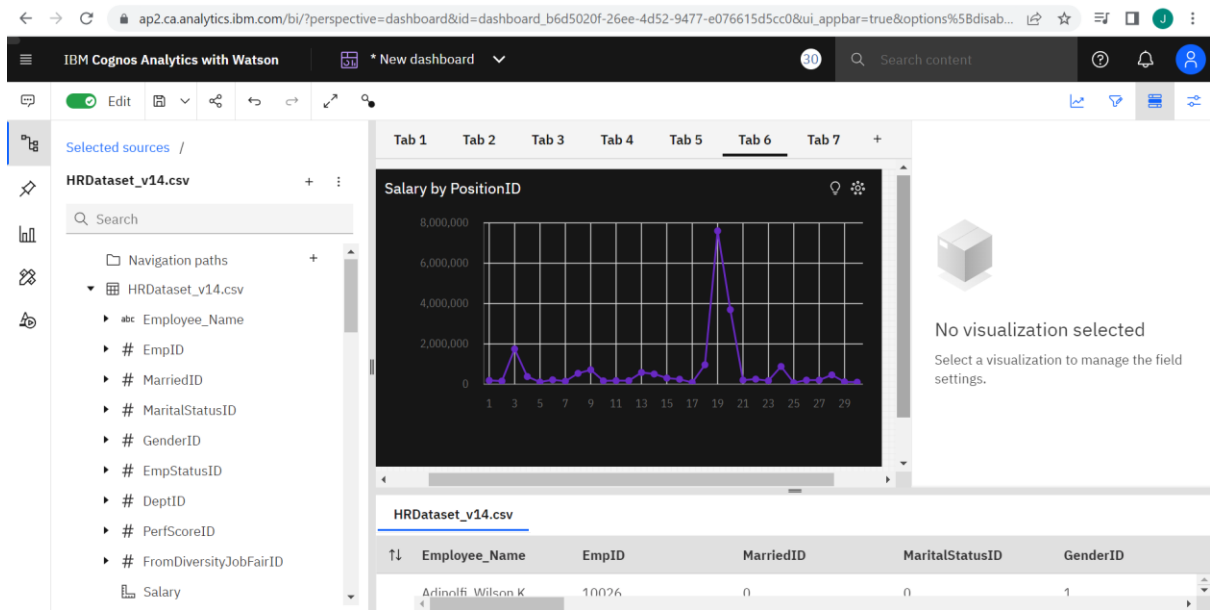
Driver analysis Drop-down list Filter dropdown

Tab 1 Tab 2 Tab 3 Tab 4 Tab 5 +

State sized by DeptID

Visualization data HRDataset_v14.csv

State	DeptID
AL	1



IBM Cognos Analytics with Watson

Selected sources /

HRDataset_v14.csv

Search

- # MaritalStatusID
- # GenderID
- # EmpStatusID
- # DeptID
- # PerfScoreID
- # FromDiversityJobFairID
- Salary
- TermID
- # PositionID
- abc Position
- State
- Zip

Dashboard properties

Canvas

Layout positioning: Relative

Page zoom (Absolute layout only)

Default zoom value: 100%

Page size

Preset: Screen 16:9

Fit page: ☐

HRDataset_v14.csv

Employee_Name	EmpID	MarriedID	MaritalStatusID	GenderID
Arinolfi, Wilson K	10026	0	0	1

IBM Cognos Analytics with Watson

Selected sources /

HRDataset_v14.csv

Search

- Navigation paths
- HRDataset_v14.csv
 - Employee_Name
 - EmpID
 - MarriedID
 - MaritalStatusID
 - GenderID
 - EmpStatusID
 - DeptID
 - PerfScoreID
 - FromDiversityJobFairID
 - Salary

Visualization properties

Visualization

Color

Current color palette: Carbon X Light

Current heat palette: Purple

RaceDesc by State

Visualization data: HRDataset_v14.csv

State	RaceDesc
AL	
CA	
CT	
GA	
IN	
MA	
MT	
ND	
NV	
OH	
PA	
TN	
UT	
VT	

ap2.ca.analytics.ibm.com/bi/?perspective=dashboard&id=dashboard_b6d5020f-26ee-4d52-9477-e076615d5cc0&ui_appbar=true&options%5Bdisab...

IBM Cognos Analytics with Watson

* New dashboard

Search content

Selected sources /

HRDataset_v14.csv

Navigation paths

HRDataset_v14.csv

- Employee_Name
- EmpID
- MarriedID
- MaritalStatusID
- GenderID
- EmpStatusID
- DeptID
- PerfScoreID
- FromDiversityJobFairID
- Salary

EmpID for State hierarchy

2%

Dashboard properties

Canvas

Layout positioning: Relative

Page zoom (Absolute layout only)

Default zoom value: 100%

Page size

Preset: Screen 16:9

Fit page: ☐

Width: Height:

HRDataset_v14.csv

Employee_Name	EmpID	MarriedID	MaritalStatusID	GenderID
---------------	-------	-----------	-----------------	----------

6) Creating a story

IBM Cognos Analytics with Watson

* New story

Search content

Selected sources /

HRDataset_v14.csv

Navigation paths

HRDataset_v14.csv

- Employee_Name
- EmpID
- MarriedID
- MaritalStatusID
- GenderID
- EmpStatusID
- DeptID
- PerfScoreID
- FromDiversityJobFairID
- Salary

DETAILS OF EMPLOYEES

JOB

TAKING YOU INTO THE WORLD OF VISUALIZATION

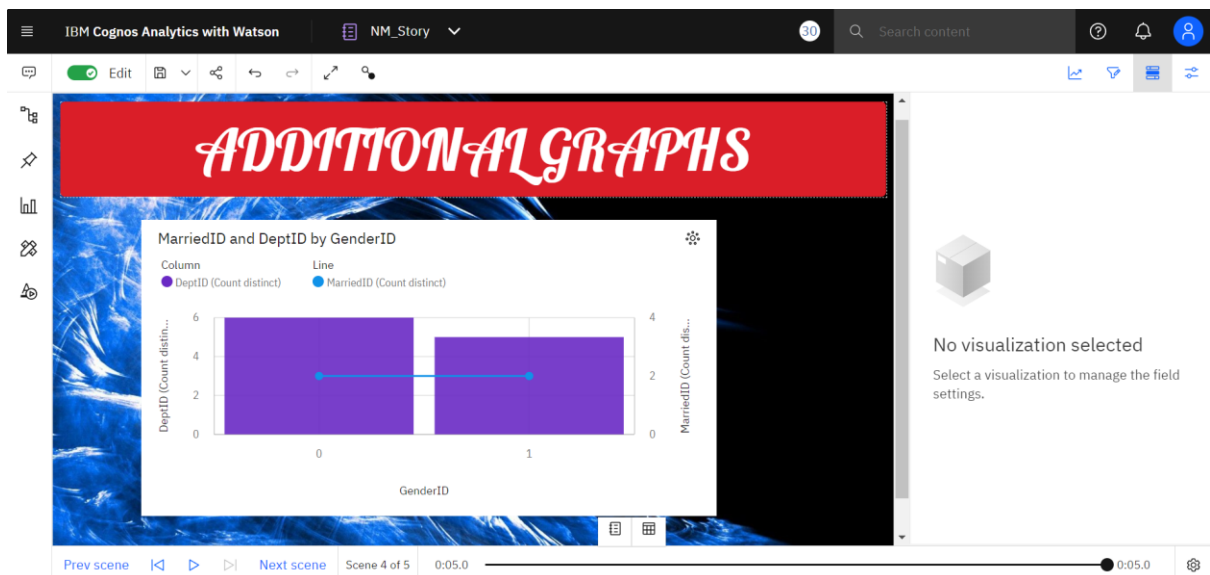
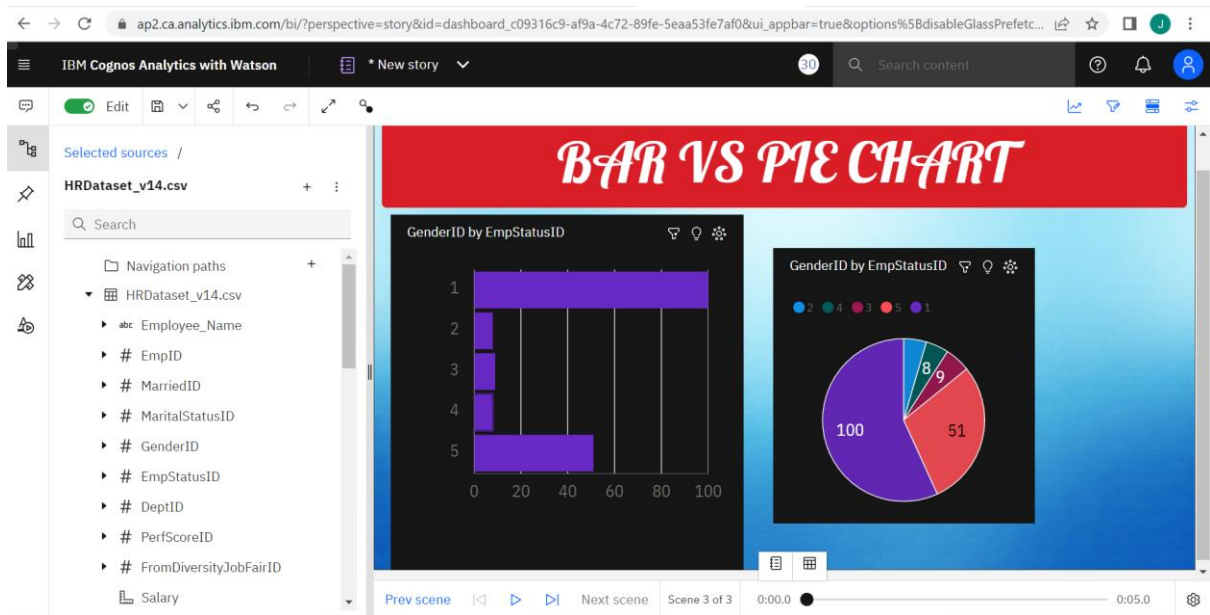
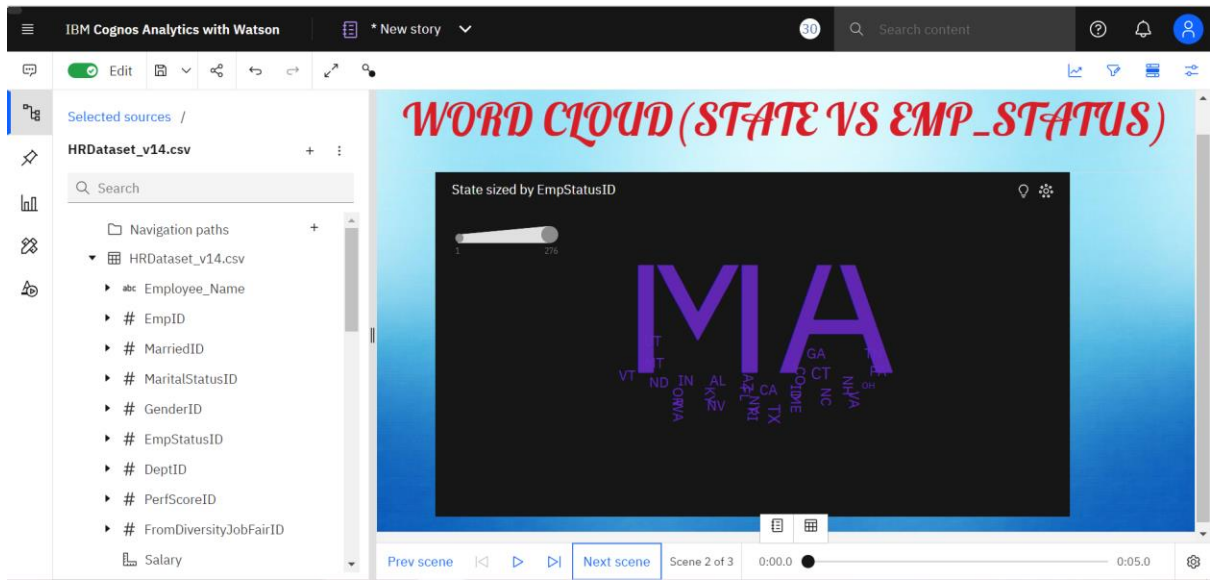
Prev scene

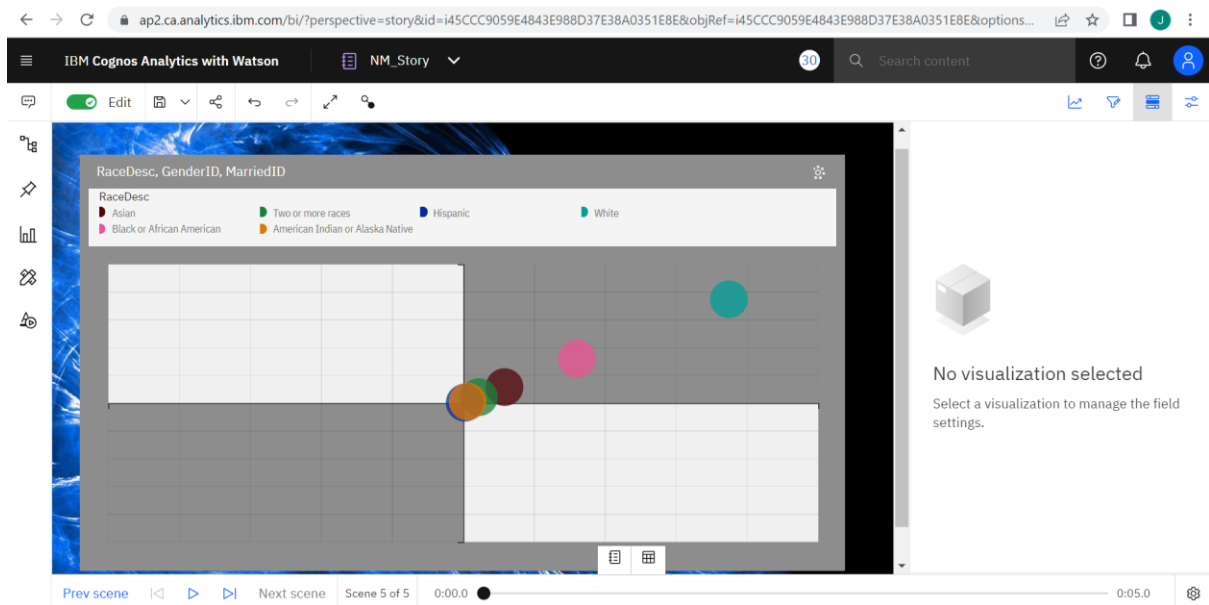
Next scene

Scene 1 of 3

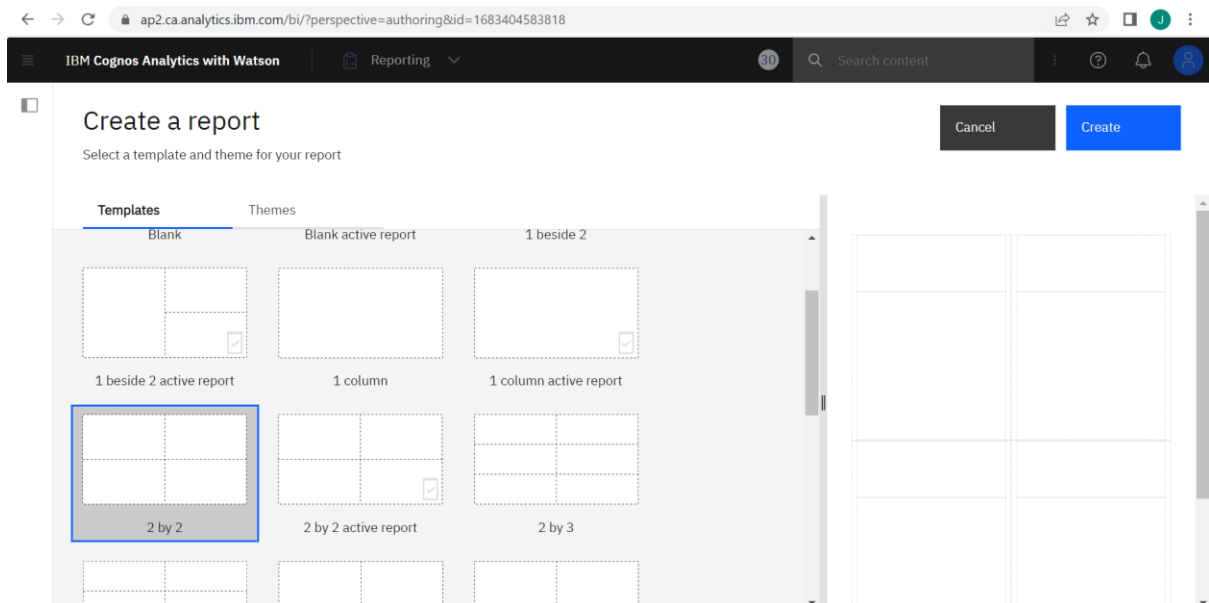
0:05.0

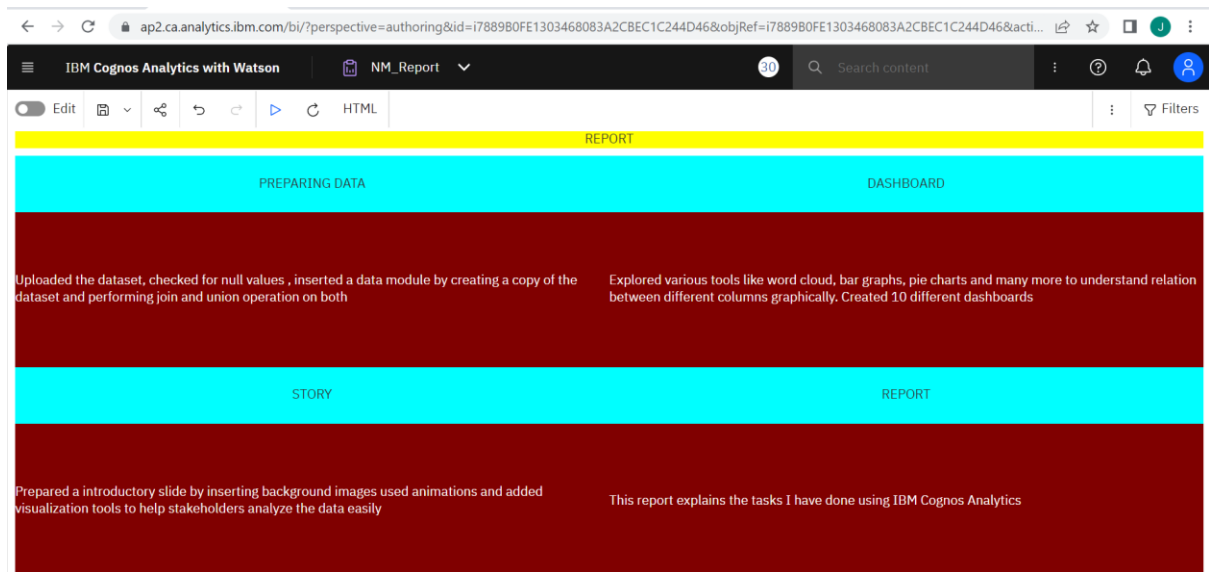
0:05.0





7) Creating a report





DASHBOARD

https://ap2.ca.analytics.ibm.com/bi/?perspective=dashboard&pathRef=.my_folders%2FNM_Dashboard&action=view&mode=dashboard

STORY

https://ap2.ca.analytics.ibm.com/bi/?perspective=story&pathRef=.my_folders%2FNM_Story&action=view&mode=dashboard

REPORT

https://ap2.ca.analytics.ibm.com/bi/?pathRef=.my_folders%2FNM_Report