

ASSIGNMENT-2

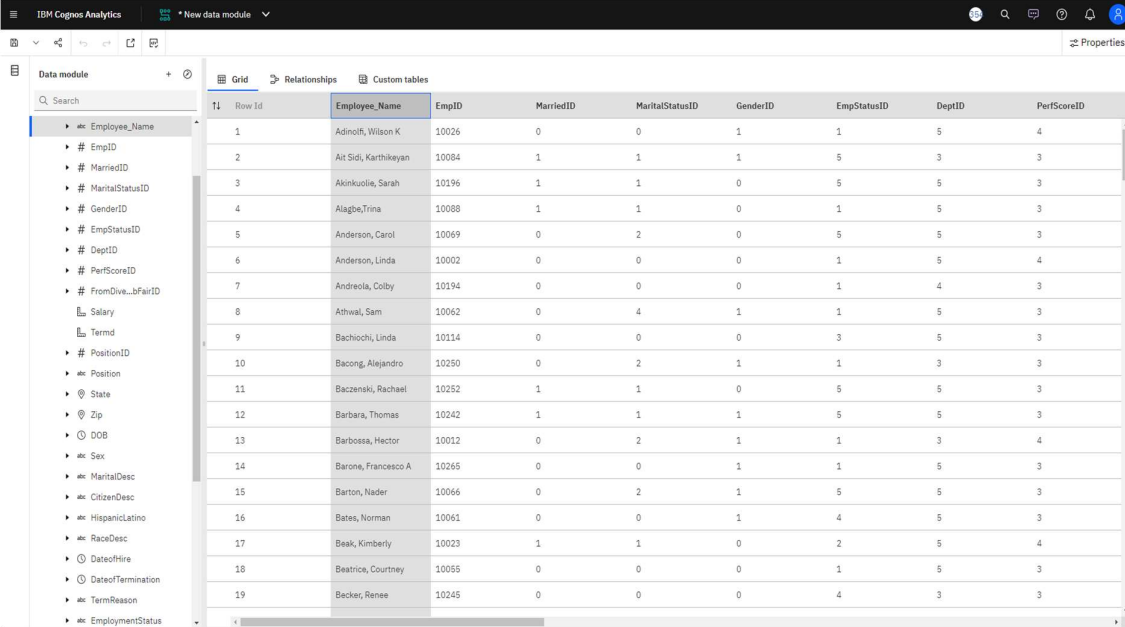
Data Analytics with IBM Cognos

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RegNo: 21BCB7104

Challenge: Upload the dataset to Cognos Analytics, prepare the data, explore and Create Interactive Dashboard, Report and Story.

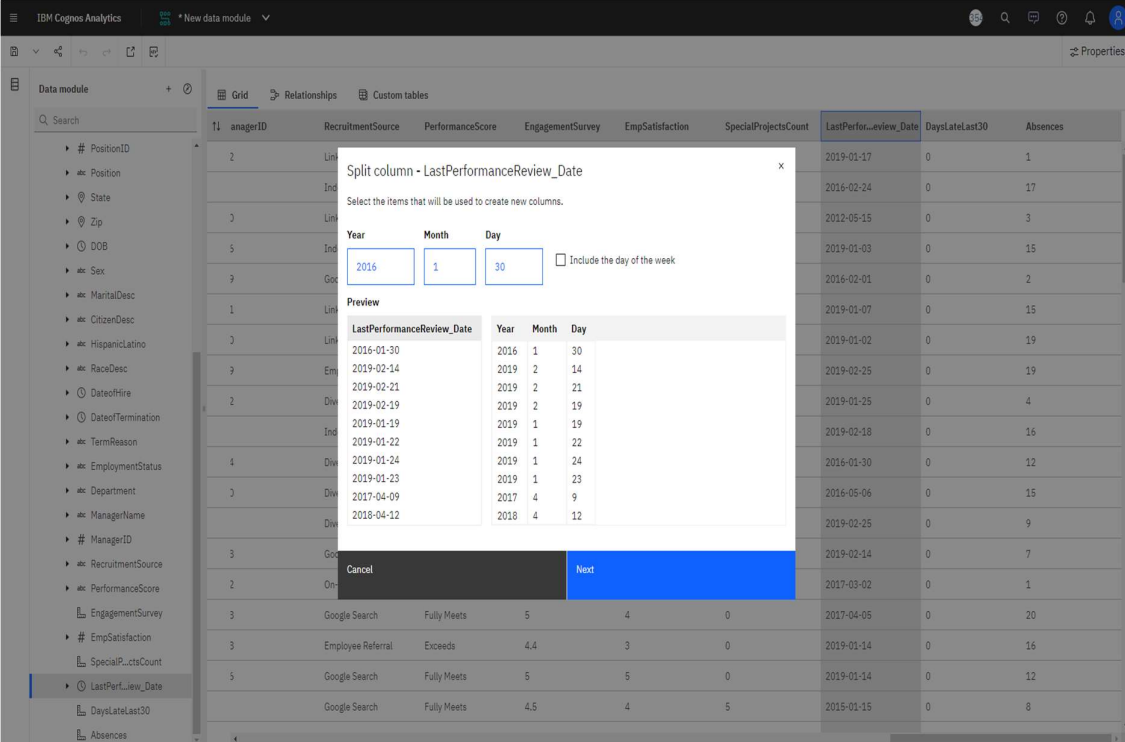
1) Uploading data to Cognos Analytics



The screenshot shows the IBM Cognos Analytics interface. On the left, a 'Data module' pane lists various fields including Employee_Name, EmpID, MarriedID, MaritalStatusID, GenderID, EmpStatusID, DeptID, PerfScoreID, FromDive...bFairID, Salary, TermID, PositionID, Position, State, Zip, DOB, Sex, MaritalDesc, CitizenDesc, HispanicLatino, RaceDesc, DateofHire, DateofTermination, TermReason, and EmploymentStatus. The main area displays a grid of data with columns: Row Id, Employee_Name, EmpID, MarriedID, MaritalStatusID, GenderID, EmpStatusID, DeptID, and PerfScoreID. The data contains 19 rows of employee records.

Row Id	Employee_Name	EmpID	MarriedID	MaritalStatusID	GenderID	EmpStatusID	DeptID	PerfScoreID
1	Adinoff, Wilson K	10026	0	0	1	1	5	4
2	Ait Sidi, Karthikayan	10084	1	1	1	5	3	3
3	Akinkuolie, Sarah	10196	1	1	0	5	5	3
4	Alagbe, Trina	10088	1	1	0	1	5	3
5	Anderson, Carol	10069	0	2	0	5	5	3
6	Anderson, Linda	10002	0	0	0	1	5	4
7	Andreola, Colby	10194	0	0	0	1	4	3
8	Athwal, Sam	10062	0	4	1	1	5	3
9	Bachiochi, Linda	10114	0	0	0	3	5	3
10	Bacong, Alejandro	10250	0	2	1	1	3	3
11	Baczinski, Rachael	10252	1	1	0	5	5	3
12	Barbara, Thomas	10242	1	1	1	5	5	3
13	Barbosa, Hector	10012	0	2	1	1	3	4
14	Barone, Francesco A	10245	0	0	1	1	5	3
15	Barton, Nader	10066	0	2	1	5	5	3
16	Bates, Norman	10061	0	0	1	4	5	3
17	Beak, Kimberly	10023	1	1	0	2	5	4
18	Beatrice, Courtney	10055	0	0	0	1	5	3
19	Becker, Renee	10245	0	0	0	4	3	3

2) splitting the date of joined, terminated and performance review and preparing the data.



The screenshot shows the IBM Cognos Analytics interface with a data module containing columns: anagerID, RecruitmentSource, PerformanceScore, EngagementSurvey, EmpSatisfaction, SpecialProjectsCount, LastPerfor...view_Date, DaysLateLast30, and Absences. A dialog box titled 'Split column - LastPerformanceReview_Date' is open, allowing the user to select items to create new columns. The dialog includes input fields for Year (2016), Month (1), and Day (30), and a checkbox for 'Include the day of the week'. A preview table shows the resulting date splits.

Year	Month	Day
2016	1	30

LastPerformanceReview_Date	Year	Month	Day
2016-01-30	2016	1	30
2019-02-14	2019	2	14
2019-02-21	2019	2	21
2019-02-19	2019	2	19
2019-01-19	2019	1	19
2019-01-22	2019	1	22
2019-01-24	2019	1	24
2019-01-23	2019	1	23
2017-04-09	2017	4	9
2018-04-12	2018	4	12

IBM Cognos Analytics * New data module

Data module

Grid Relationships Custom tables

Search

Zip

DOB

Sex

MaritalDesc

CitizenDesc

HispanicLatino

RaceDesc

DateofHire

DateofTermination

TermReason

EmploymentStatus

Department

ManagerName

ManagerID

RecruitmentSource

PerformanceScore

EngagementSurvey

EmpSatisfaction

SpecialPctsCount

LastPerf_Lew_Date

Year

Month

Day

DaysLateLast30

Absences

Split column - DateofHire

Review new columns. You can change the column names, and deselect the columns that you don't need.

DateofHire	<input checked="" type="checkbox"/> H_Year	<input checked="" type="checkbox"/> H_Month	<input checked="" type="checkbox"/> H_Day
2012-01-09	2012	1	9
2014-11-10	2014	11	10
2013-09-30	2013	9	30
2011-01-10	2011	1	10
2012-02-20	2012	2	20
2008-10-27	2008	10	27
2012-03-05	2012	3	5
2009-01-05	2009	1	5
2014-05-05	2014	5	5
2011-11-07	2011	11	7
2013-01-07	2013	1	7
2017-04-20	2017	4	20
2012-03-07	2012	3	7
2011-11-28	2011	11	28

Previous Cancel OK

CitizenDesc	HispanicLatino	RaceDesc	DateofHire	DateofTermination	TermReason	EmploymentStatus	Department	ManagerName
US Citizen						Active	Production	Michael Albert
US Citizen						Voluntarily Terminated	IT/IS	Simon Roup
US Citizen						Voluntarily Terminated	Production	Kissy Sullivan
US Citizen						Active	Production	Elijah Gray
US Citizen						Voluntarily Terminated	Production	Webster Butler
US Citizen						Active	Production	Amy Dunn
US Citizen						Active	Software Engineering	Alex Sweetwater
US Citizen						Active	Production	Ketasia Liebig
US Citizen						Active	Production	Brannon Miller
US Citizen						Active	IT/IS	Peter Monroe
US Citizen						Voluntarily Terminated	Production	David Stanley
US Citizen						Voluntarily Terminated	Production	Kissy Sullivan
US Citizen						Active	IT/IS	Simon Roup
US Citizen						Active	Production	Kelley Spirea
US Citizen						Voluntarily Terminated	Production	Michael Albert
US Citizen	No	White	2011-02-21	2017-08-04	attendance	Terminated for Cause	Production	Kelley Spirea
US Citizen	No	White	2016-07-21	Null	N/A-StillEmployed	Active	Production	Kelley Spirea
Eligible Non-Citizen	No	White	2011-04-04	Null	N/A-StillEmployed	Active	Production	Elijah Gray
US Citizen	Yes	White	2014-07-07	2015-09-12	performance	Terminated for Cause	IT/IS	Simon Roup

IBM Cognos Analytics * New data module

Data module

Grid Relationships Custom tables

Search

Zip

DOB

Sex

MaritalDesc

CitizenDesc

HispanicLatino

RaceDesc

DateofHire

H_Year

H_Month

H_Day

DateofTermination

TermReason

EmploymentStatus

Department

ManagerName

ManagerID

RecruitmentSource

PerformanceScore

EngagementSurvey

EmpSatisfaction

SpecialPctsCount

LastPerf_Lew_Date

TI	no	RaceDesc	DateofHire	H_Year	H_Month	H_Day	DateofTermination	TermReason	EmploymentStatus	Department
		White	2011-07-05	2011	7	5	Null	N/A-StillEmployed	Active	Production
		White	2015-03-30	2015	3	30	2016-06-16	career change	Voluntarily Terminated	IT/IS
		White	2011-07-05	2011	7	5	2012-09-24	hours	Voluntarily Terminated	Production
		White	2008-01-07	2008	1	7	Null	N/A-StillEmployed	Active	Production
		White	2011-07-11	2011	7	11	2016-09-06	return to school	Voluntarily Terminated	Production
		White	2012-01-09	2012	1	9	Null	N/A-StillEmployed	Active	Production
		White	2014-11-10	2014	11	10	Null	N/A-StillEmployed	Active	Software I
		White	2013-09-30	2013	9	30	Null	N/A-StillEmployed	Active	Production
		Black or African American	2009-07-06	2009	7	6	Null	N/A-StillEmployed	Active	Production
		White	2015-01-05	2015	1	5	Null	N/A-StillEmployed	Active	IT/IS
		Black or African American	2011-01-10	2011	1	10	2017-01-12	Another position	Voluntarily Terminated	Production
		Black or African American	2012-04-02	2012	4	2	2016-09-19	unhappy	Voluntarily Terminated	Production
		Black or African American	2014-11-10	2014	11	10	Null	N/A-StillEmployed	Active	IT/IS
		Two or more races	2012-02-20	2012	2	20	Null	N/A-StillEmployed	Active	Production
		White	2012-09-24	2012	9	24	2017-04-06	Another position	Voluntarily Terminated	Production
		White	2011-02-21	2011	2	21	2017-08-04	attendance	Terminated for Cause	Production
		White	2016-07-21	2016	7	21	Null	N/A-StillEmployed	Active	Production
		White	2011-04-04	2011	4	4	Null	N/A-StillEmployed	Active	Production
		White	2014-07-07	2014	7	7	2015-09-12	performance	Terminated for Cause	IT/IS

IBM Cognos Analytics

test

* New data module

Grid

Relationships

Custom tables

Data module

Search

Zip

DOB

Sex

MaritalDesc

CitizenDesc

HispanicLatino

RaceDesc

DateofHire

H_Year

H_Month

H_Day

DateofTermination

TermReason

EmploymentStatus

Department

ManagerName

ManagerID

RecruitmentSource

PerformanceScore

EngagementSurvey

EmpSatisfaction

SpecialP...ctsCount

LastPerf...iew_Date

Year

Month

6

5

0

2019-01-17

2019

1

17

0

1

96

3

6

2016-02-24

2016

2

24

0

17

02

3

0

2012-05-15

2012

5

15

0

3

84

5

0

2019-01-03

2019

1

3

0

15

4

0

2016-02-01

2016

2

1

0

2

5

0

2019-01-07

2019

1

7

0

15

04

3

4

2019-01-02

2019

1

2

0

19

4

0

2019-02-25

2019

2

25

0

19

46

3

0

2019-01-25

2019

1

25

0

4

5

6

2019-02-18

2019

2

18

0

16

2

4

0

2016-01-30

2016

1

30

0

12

2

3

0

2016-05-06

2016

5

6

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15

28

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5

2019-02-25

2019

2

25

0

9

6

4

0

2019-02-14

2019

2

14

0

7

5

0

2017-03-02

2017

3

2

0

1

4

0

2017-04-05

2017

4

5

0

20

4

3

0

2019-01-14

2019

1

14

0

16

5

0

2019-01-14

2019

1

14

0

12

5

4

5

2015-01-15

2015

1

15

0

8

IBM Cognos Analytics test * HRD data module

Grid Relationships Custom tables

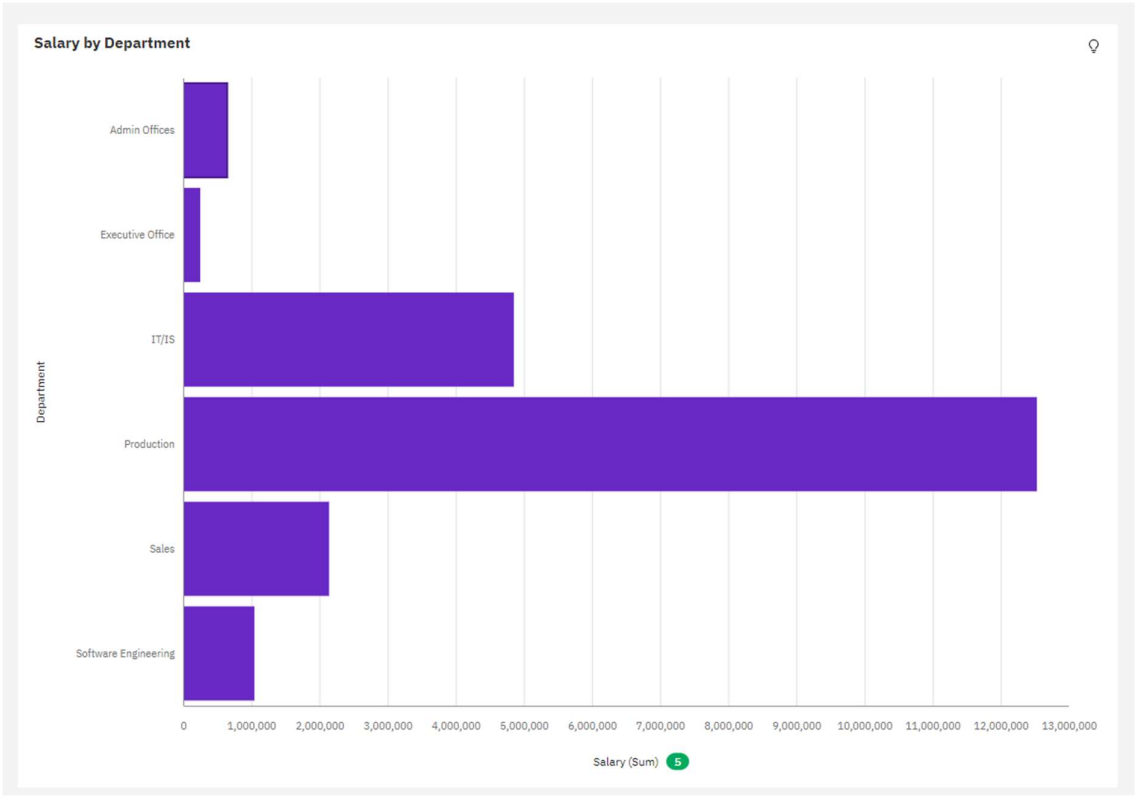
Search

MaritalDesc
 CitizenDesc
 HispanicLatino
 RaceDesc
 DateofHire
 H_Year
 H_Month
 H_Day
 DateofTermination
 T_Year
 TermReason
 EmploymentStatus
 Department
 ManagerName
 ManagerID
 RecruitmentSource
 PerformanceScore
 EngagementSurvey
 EmpSatisfaction
 SpecialP...ctsCount
 LastPerf...iew_Date
 Year
 Month
 Day
 DaysLateLast30

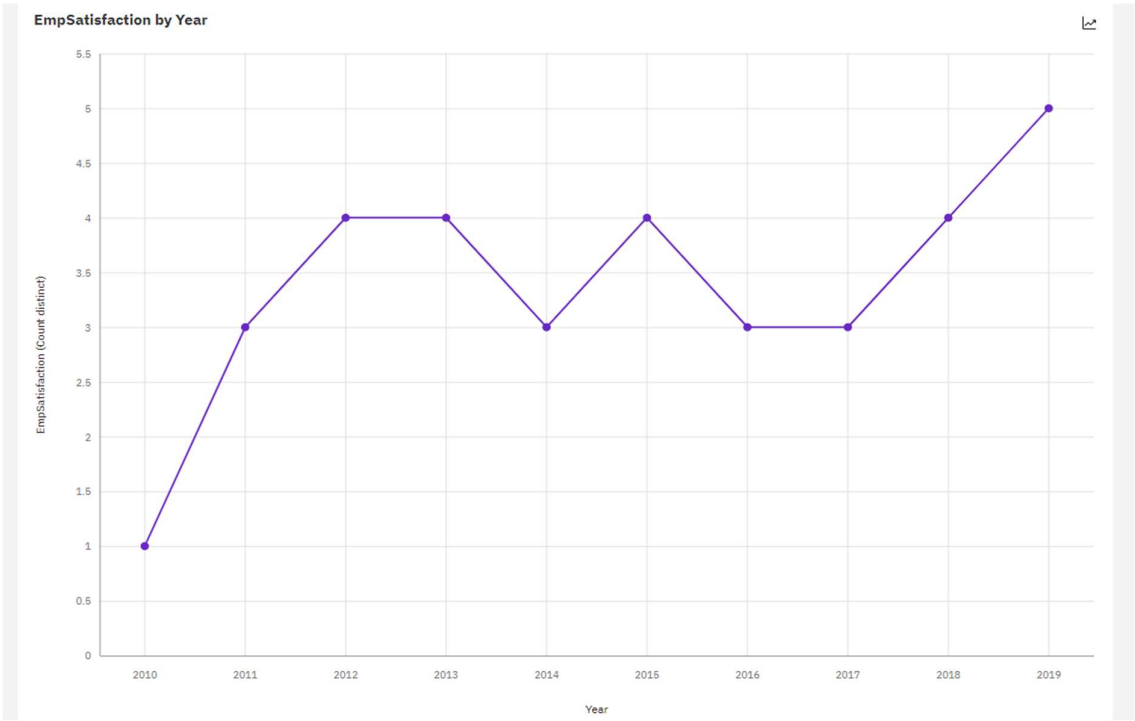
T1	ic	DateofHire	H_Year	H_Month	H_Day	DateofTermination	T_Year	TermReason	EmploymentStatus	Depart
		2011-07-05	2011	7	5	Null	Null	N/A-StillEmployed	Active	Prodi
		2015-03-30	2015	3	30	2016-06-16	2016	career change	Voluntarily Terminated	IT/IS
		2011-07-05	2011	7	5	2012-09-24	2012	hours	Voluntarily Terminated	Prodi
		2008-01-07	2008	1	7	Null	Null	N/A-StillEmployed	Active	Prodi
		2011-07-11	2011	7	11	2016-09-06	2016	return to school	Voluntarily Terminated	Prodi
		2012-01-09	2012	1	9	Null	Null	N/A-StillEmployed	Active	Prodi
		2014-11-10	2014	11	10	Null	Null	N/A-StillEmployed	Active	Softw
		2013-09-30	2013	9	30	Null	Null	N/A-StillEmployed	Active	Prodi
	African	2009-07-06	2009	7	6	Null	Null	N/A-StillEmployed	Active	Prodi
		2015-01-05	2015	1	5	Null	Null	N/A-StillEmployed	Active	IT/IS
	African	2011-01-10	2011	1	10	2017-01-12	2017	Another position	Voluntarily Terminated	Prodi
	African	2012-04-02	2012	4	2	2016-09-19	2016	unhappy	Voluntarily Terminated	Prodi
	African	2014-11-10	2014	11	10	Null	Null	N/A-StillEmployed	Active	IT/IS
	more races	2012-02-20	2012	2	20	Null	Null	N/A-StillEmployed	Active	Prodi
		2012-09-24	2012	9	24	2017-04-06	2017	Another position	Voluntarily Terminated	Prodi
		2011-02-21	2011	2	21	2017-08-04	2017	attendance	Terminated for Cause	Prodi
		2016-07-21	2016	7	21	Null	Null	N/A-StillEmployed	Active	Prodi
		2011-04-04	2011	4	4	Null	Null	N/A-StillEmployed	Active	Prodi
		2014-07-07	2014	7	7	2015-09-12	2015	performance	Terminated for Cause	IT/IS

3) Exploration and create visualizations

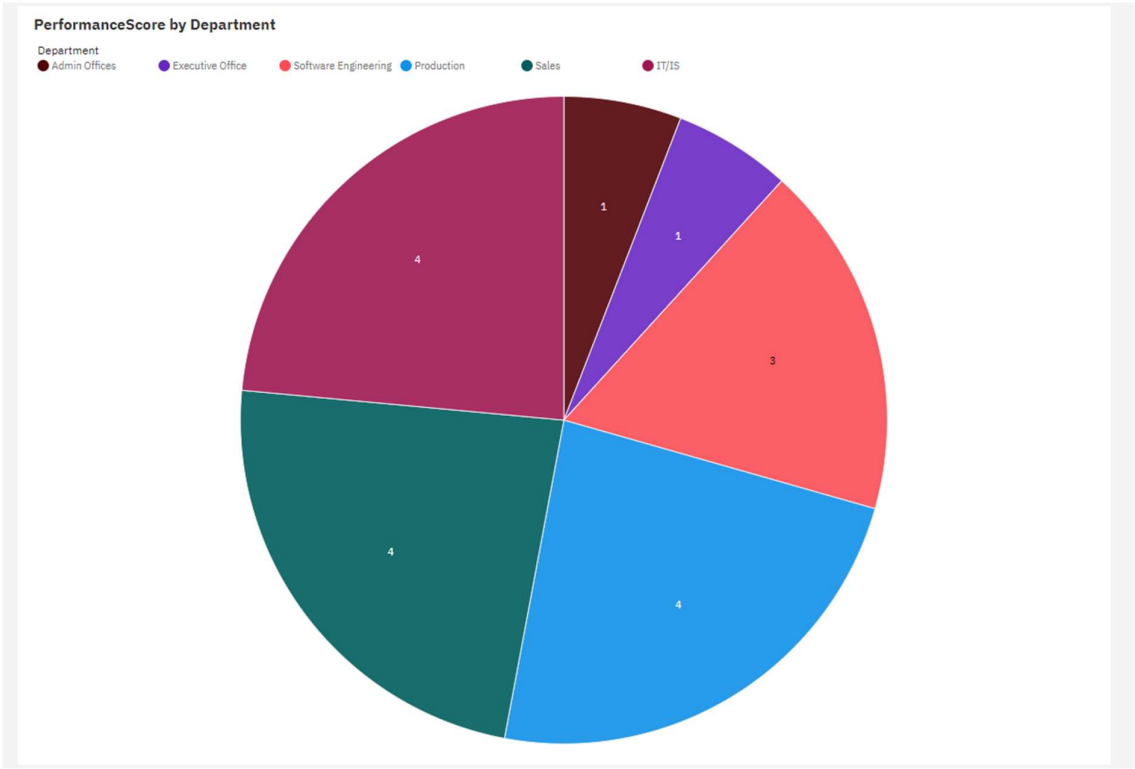
1) bar graph



2) line graph



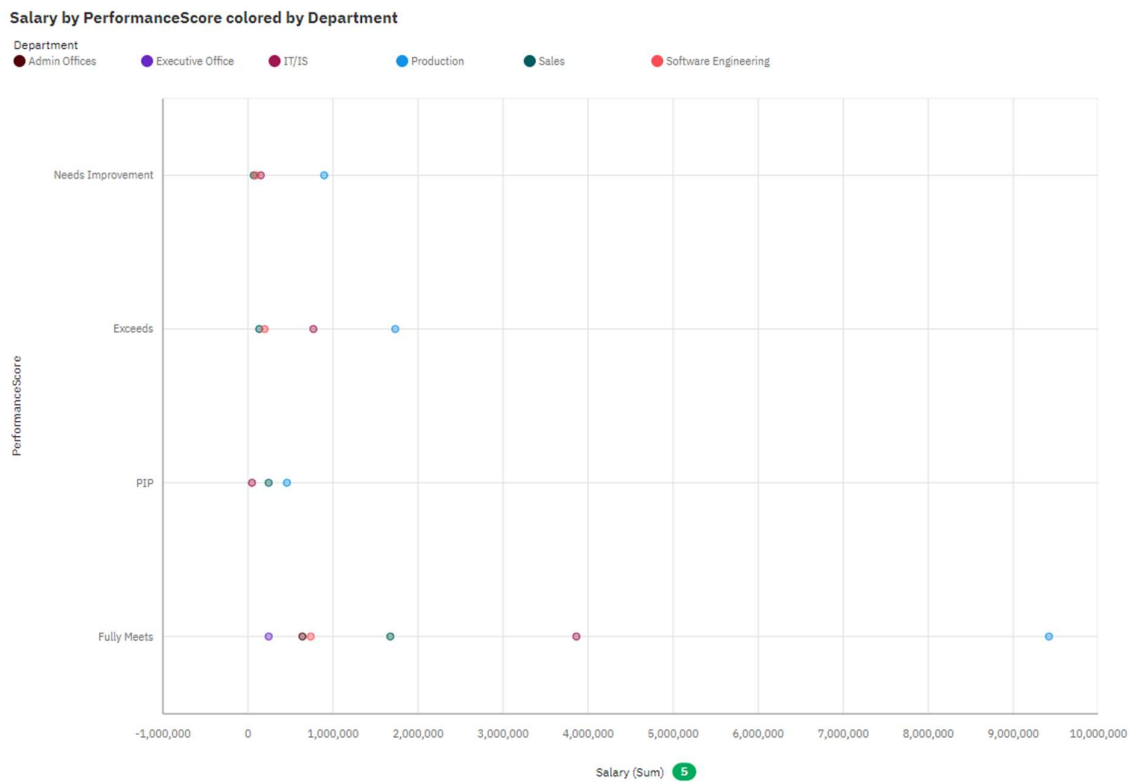
3) pie chart



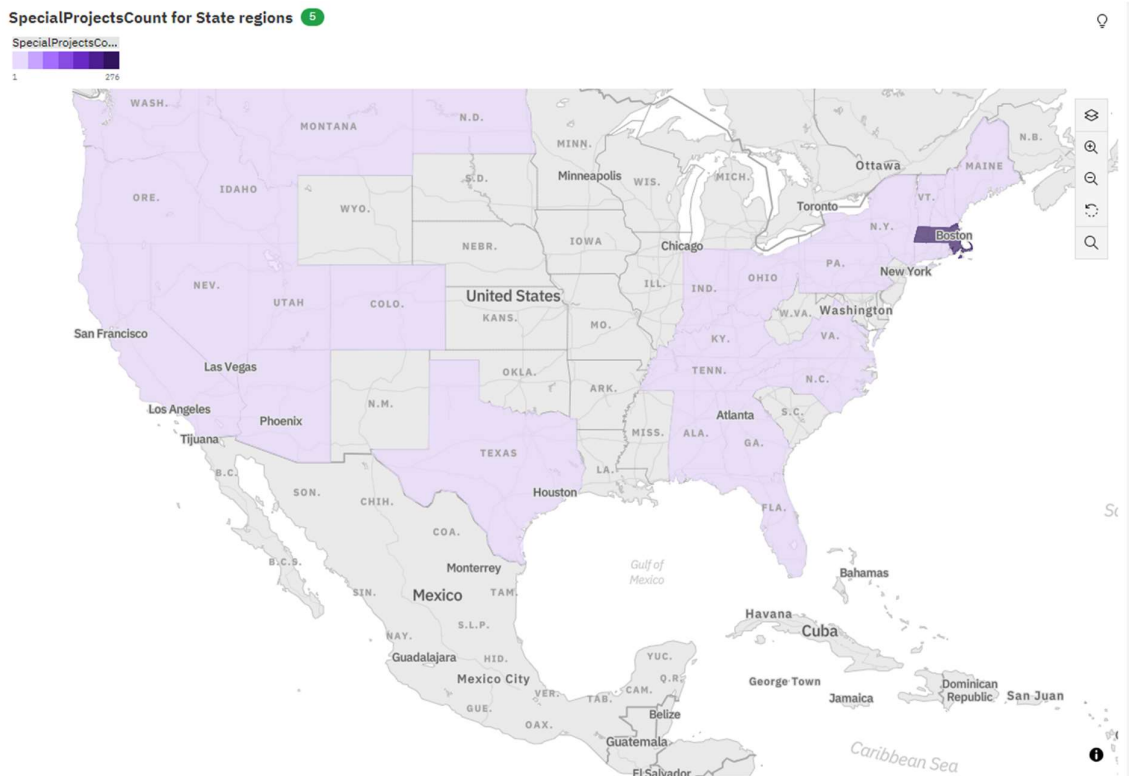
4) heat map



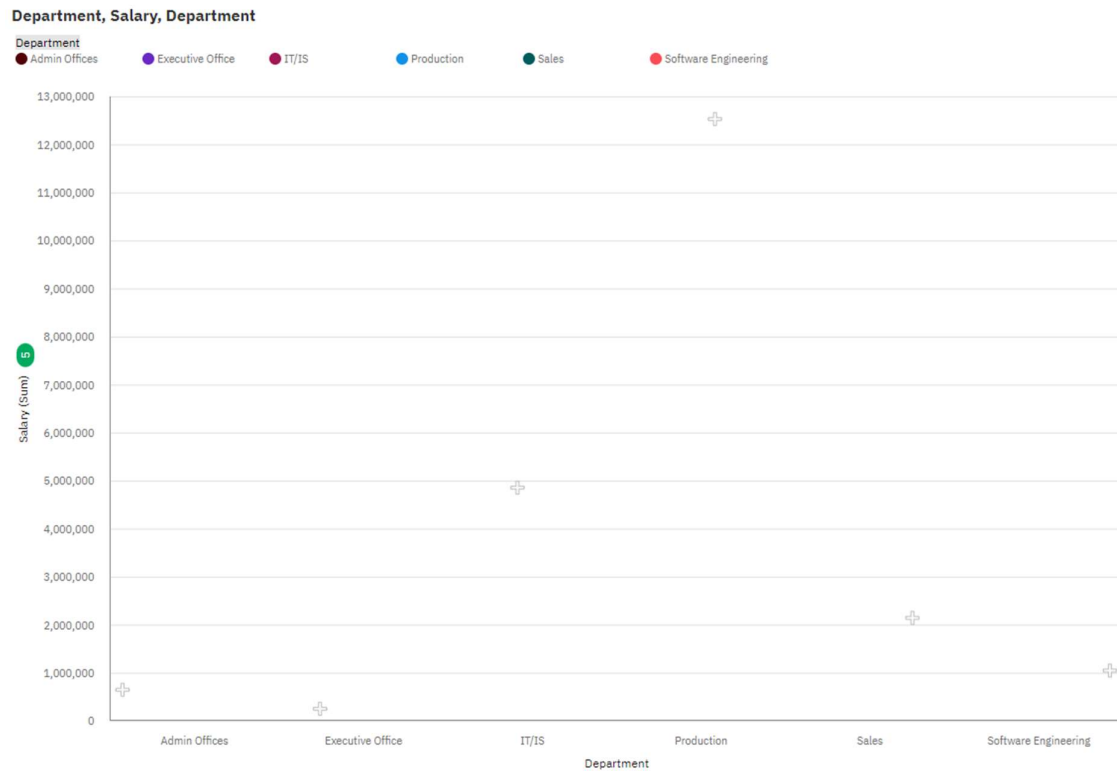
5) scatter plot



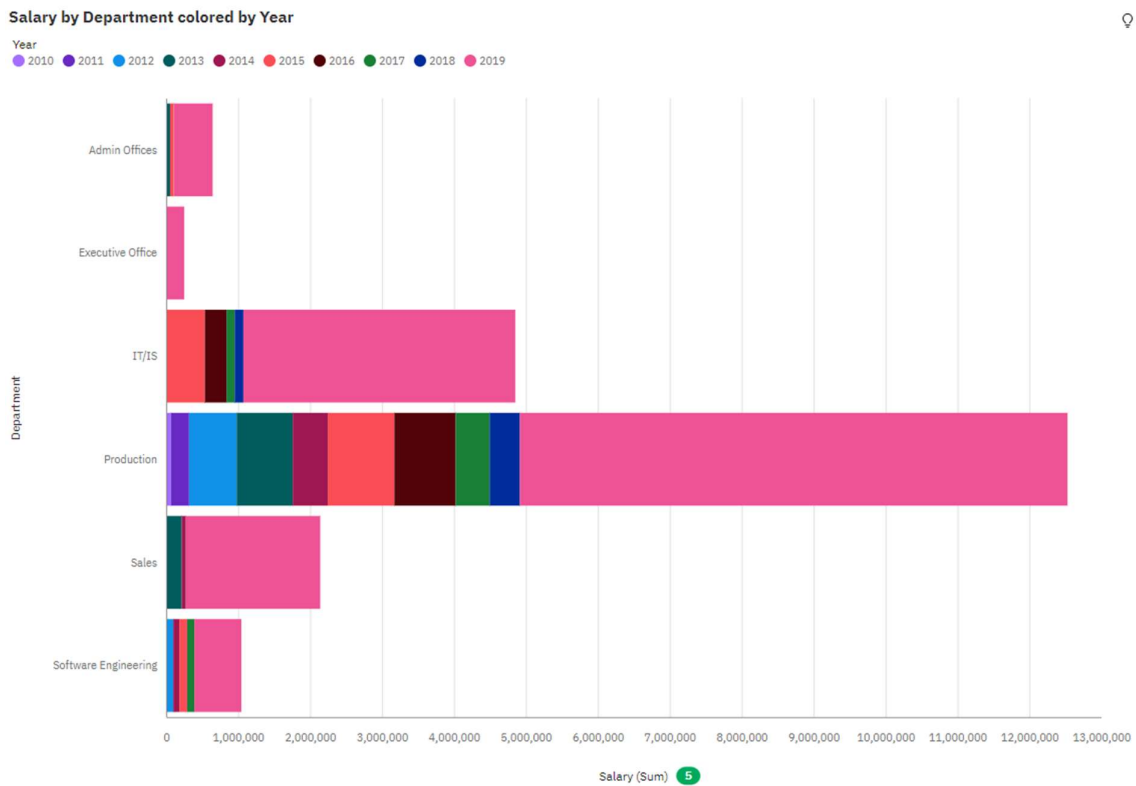
6) Map



7) Box plot

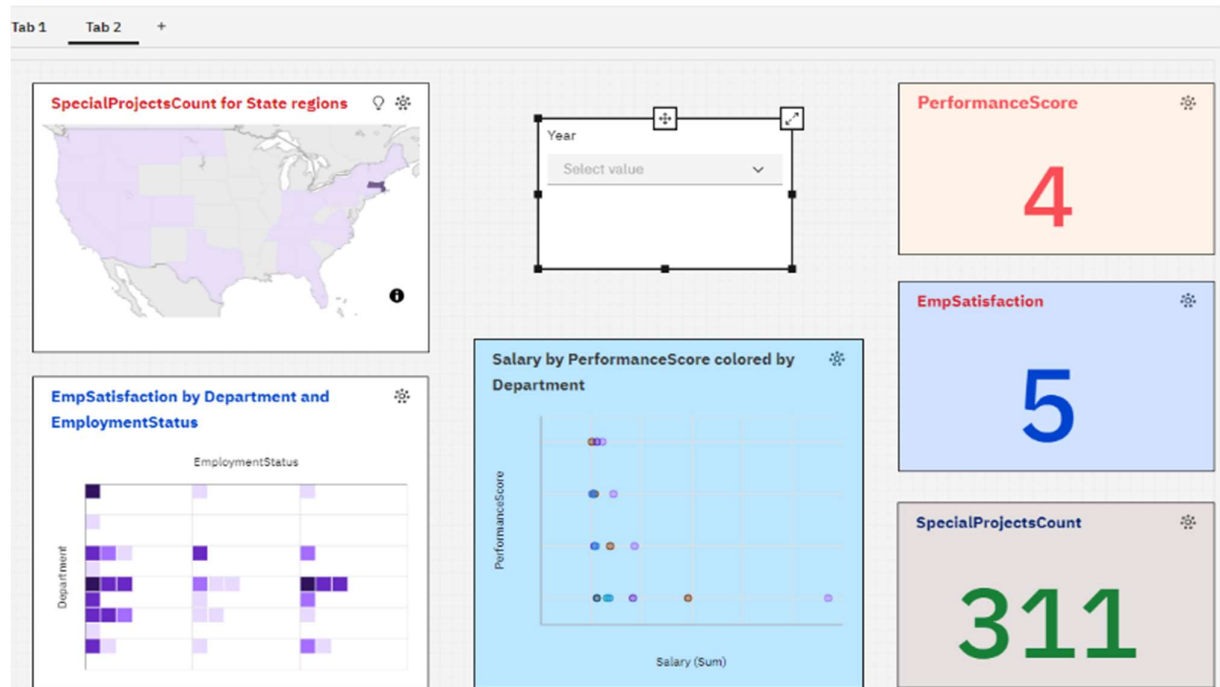
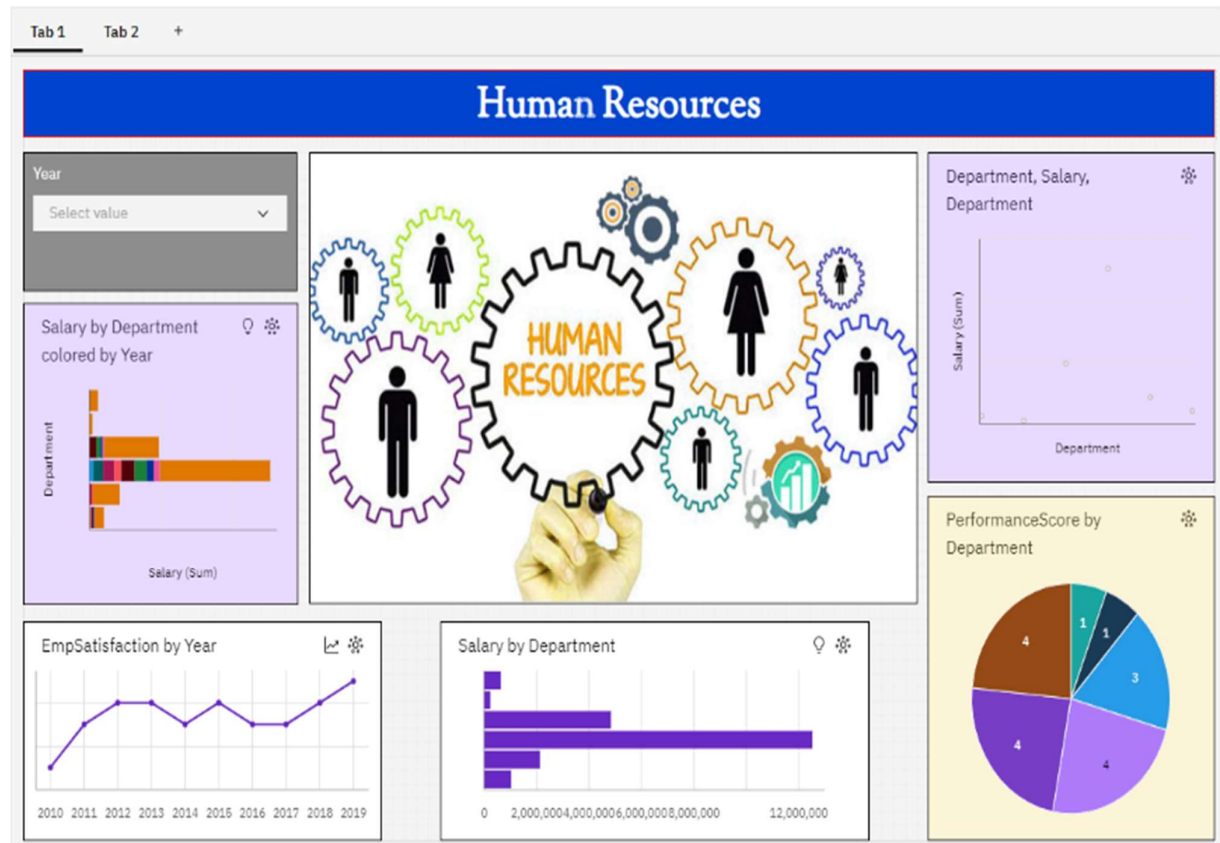


8) stacked Bar



4) creating dashboards using visualizations

https://us1.ca.analytics.ibm.com/bi/?perspective=dashboard&pathRef=.my_folders%2Fassignments%2FHRRD%2Bdashboard&action=view&mode=dashboard&subView=model0000018a641d3296_00000002



5) creating a report

Link to see the below report of human resources data :

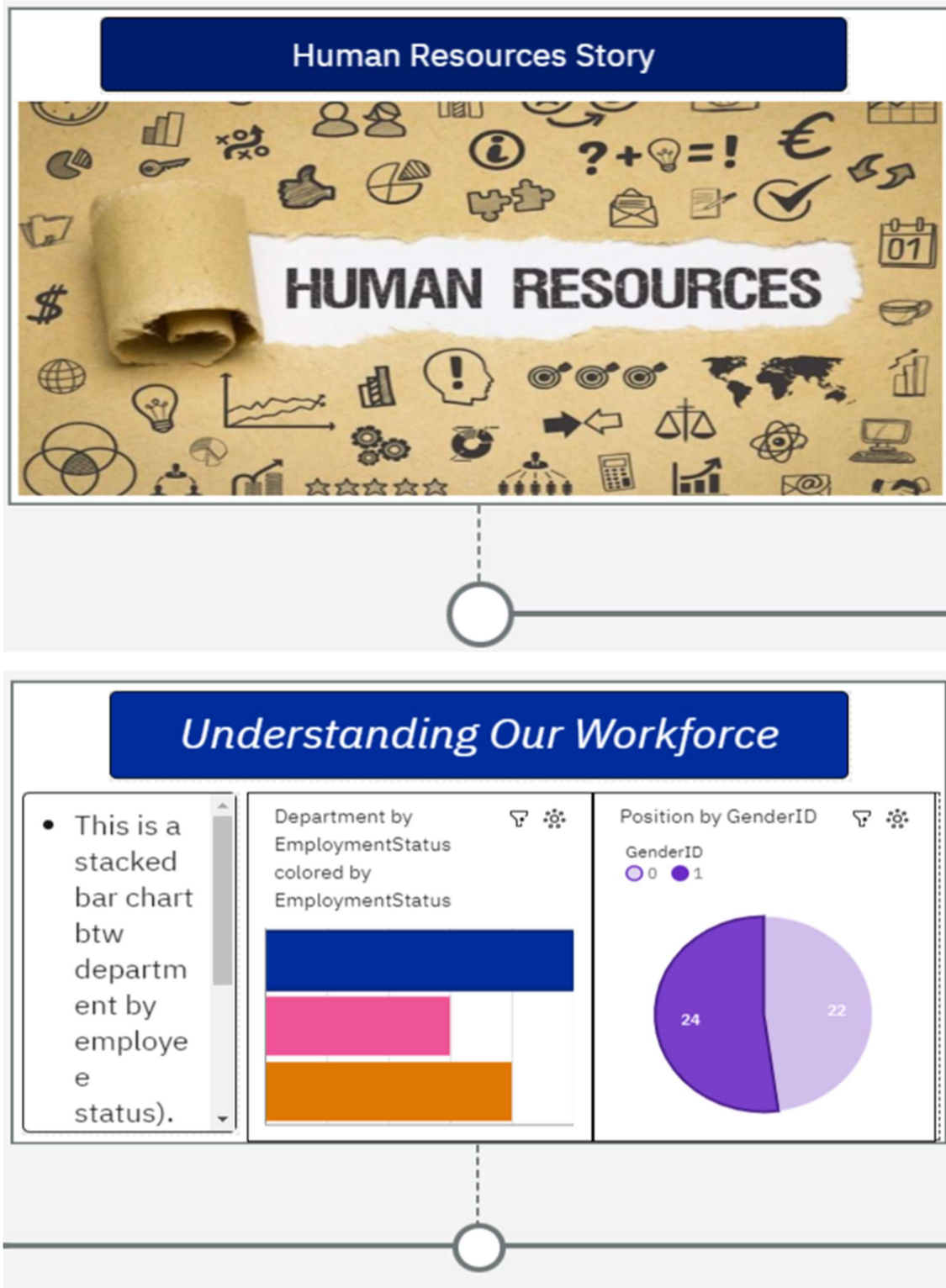
https://us1.ca.analytics.ibm.com/bi/?pathRef=.my_folders%2Fassignments%2FHRD%2Breport&action=run&format=HTML&prompt=false



6) creating a story for human resources data

Link to see the below story of human resources data :

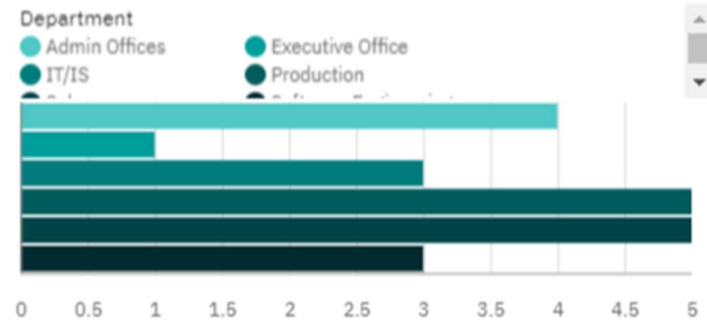
https://us1.ca.analytics.ibm.com/bi/?perspective=story&pathRef=.my_folders%2Fassignments%2FHRD%2Bstory&action=view&sceneId=-1&sceneTime=0



Fostering Employee Engagement

- This is a bar chart for employee satisfaction according to their departments colored by the departments.

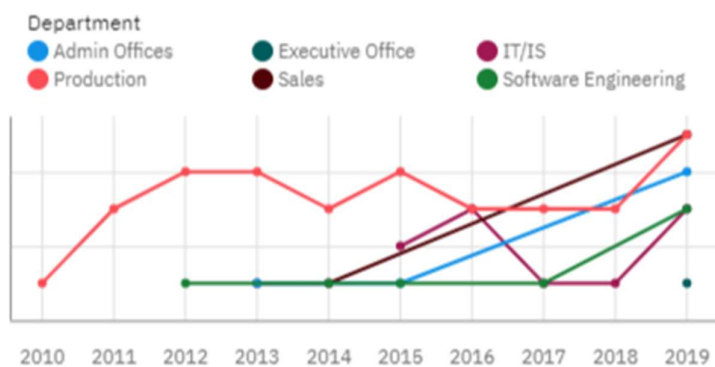
EmpSatisfaction by Department colored by Department



Investing in Employee Growth

- This is a line chart of employee satisfaction by last year recent performance review

EmpSatisfaction by Year colored by Department

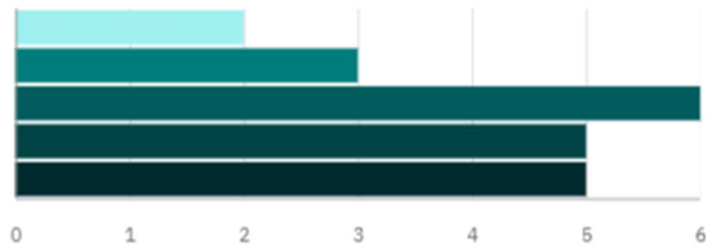


Retaining Top Talent

- This is a stacked bar chart of department by employee satisfaction.

Department by EmpSatisfaction colored by EmpSatisfaction

EmpSatisfaction
1 2 3 4 5



Building a Diverse Workforce

- This is a scatter plot of department by Gender_ID to show that they building a diverse workforce.

GenderID by Department



Measuring Performance Excellence

- This is a radar chart for measuring performance excellence to compare departments across employee

Department by EmpSatisfaction colored by Department

Department
● Admin Offices ● Executive Office

