

CSI4142

PHASE 3: Data Mining

Fact Table joined with all dimensions:

Query

Query History

Scratch Pad

X

21 JOIN

22 dim_employee_demographic emp ON ft.employee_demographic_key = emp.employee_demographic_key

23 JOIN

24 dim_graduate_demographic grad ON ft.graduate_demographic_key = grad.graduate_demographic_key

25 JOIN

26 dim_employment_status emp_status ON ft.employment_status_key = emp_status.employment_key

27)

28

29 SELECT * FROM processed_fact_table;

30

31 -- ROLL UP QUERY

32 -- SELECT sector_name, sum(gdp_value)

33 -- FROM processed_fact_table

34 -- GROUP BY sector_name

35

36 -- DRILL DOWN QUERY

37 -- SELECT employee_gender, sector_name, sum(number_of_employees)

38 -- FROM processed_fact_table

39 -- GROUP BY employee_gender, sector_name

40

Data Output

Messages

Graph Visualiser X

Notifications

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year

bigint

field_of_study

text

sector_name

text

employee_gender

character varying (255)

age_group

character varying (255)

graduate_gender

character varying (255)

employment_status

character varying (255)

number_of_employees

numeric

gdp_value

numeric

1

2000

Agriculture, natural resources and conservation [9]

Accommodation and food services [72]

Female

15 to 24 years

Male

Employed

235000

22863000000

2

2000

Agriculture, natural resources and conservation [9]

Accommodation and food services [72]

Female

15 to 24 years

Female

Employed

235000

22863000000

3

2000

Architecture, engineering and related technologies [8]

Accommodation and food services [72]

Female

15 to 24 years

Male

Employed

235000

22863000000

4

2000

Architecture, engineering and related technologies [8]

Accommodation and food services [72]

Female

15 to 24 years

Female

Employed

235000

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5

2000

Business, management and public administration [5]

Accommodation and food services [72]

Female

15 to 24 years

Male

Employed

235000

22863000000

6

2000

Business, management and public administration [5]

Accommodation and food services [72]

Female

15 to 24 years

Female

Employed

235000

22863000000

7

2000

Education [1]

Accommodation and food services [72]

Female

15 to 24 years

Male

Employed

235000

22863000000

8

2000

Education [1]

Accommodation and food services [72]

Female

15 to 24 years

Female

Employed

235000

22863000000

9

2000

Health and related fields [10]

Accommodation and food services [72]

Female

15 to 24 years

Male

Employed

235000

22863000000

10

2000

Health and related fields [10]

Accommodation and food services [72]

Female

15 to 24 years

Female

Employed

235000

22863000000

11

2000

Humanities [3]

Accommodation and food services [72]

Female

15 to 24 years

Male

Employed

235000

22863000000

12

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Humanities [3]

Accommodation and food services [72]

Female

15 to 24 years

Female

Employed

235000

22863000000

13

2000

Mathematics, computer and information sciences [7]

Accommodation and food services [72]

Female

15 to 24 years

Male

Employed

235000

22863000000

Total rows: 1000 of 119952

Query complete 00:00:03.052

Ln 29, Col 23

Rollup Query:

Query Query History

```
21 JOIN
22   dim_employee_demographic emp ON ft.employee_demographic_key = emp.employee_demographic_key
23 JOIN
24   dim_graduate_demographic grad ON ft.graduate_demographic_key = grad.graduate_demographic_key
25 JOIN
26   dim_employment_status emp_status ON ft.employment_status_key = emp_status.employment_key
27 )
28
29 -- SELECT * FROM processed_fact_table;
30
31 -- ROLL UP QUERY
32 SELECT sector_name, sum(gdp_value)
33 FROM processed_fact_table
34 GROUP BY sector_name
35
36 -- DRILL DOWN QUERY
37 -- SELECT employee_gender, sector_name, sum(number_of_employees)
38 -- FROM processed_fact_table
39 -- GROUP BY employee_gender, sector_name
40
```

Data Output Messages Graph Visualiser X Notifications



	sector_name text	sum numeric
1	Information, culture and recreation [51, 71]	449604624000000
2	Agriculture, forestry, fishing and hunting [11]	217408464000000
3	Retail trade [44-45]	576352560000000
4	Utilities [22]	267908256000000
5	Public administration [91]	778441440000000
6	Construction [23]	794953824000000
7	Accommodation and food services [72]	239242080000000
8	Finance and insurance [52]	731486784000000
9	Professional, scientific and technical services [54]	633725232000000
10	Health care and social assistance [62]	796667424000000
11	Business, building and other support services [55, 5...]	373839648000000
12	Mining, quarrying, and oil and gas extraction [21]	735803040000000
13	Transportation and warehousing [48-49]	495811680000000

Total rows: 17 of 17 Query complete 00:00:00.922

Drill down query:

Query

Query History

31

-- ROLL UP QUERY

32

-- SELECT sector_name, sum(gdp_value)

33

-- FROM processed_fact_table

34

-- GROUP BY sector_name

35

36

-- DRILL DOWN QUERY

37

SELECT employee_gender,sector_name, sum(number_of_employees)

38

FROM processed_fact_table

39

GROUP BY employee_gender, sector_name

40

41

-- SLICE QUERY

42

-- SELECT *

43

-- FROM processed_fact_table

44

-- WHERE field_of_study = 'Mathematics, computer and information sciences [7]'

45

46

-- DICE QUERIES

47

-- SELECT *

48

-- FROM processed_fact_table

49

-- WHERE year=2020 and field_of_study = 'Mathematics, computer and information sciences [7]' and sector_name = 'Professional,

50

Data Output

Messages

Graph Visualiser

X

Notifications

	employee_gender character varying (255)	sector_name text	sum numeric
1	Female	Accommodation and food services [72]	405574400
2	Female	Agriculture, forestry, fishing and hunting [11]	65234008
3	Female	Business, building and other support services [55, 5...	195702472
4	Female	Construction [23]	87223668
5	Female	Educational services [61]	475834800
6	Female	Finance and insurance [52]	276902136
7	Female	Health care and social assistance [62]	984961600
8	Female	Information, culture and recreation [51, 71]	215257952
9	Female	Manufacturing [31-33]	340667600
10	Female	Mining, quarrying, and oil and gas extraction [21]	27851320
11	Female	Other services (except public administration) [81]	240538620
12	Female	Professional, scientific and technical services [54]	321383216
13	Female	Public administration [91]	267753780

Total rows: 34 of 34

Query complete 00:00:00.529

Slice Query:

Query

Query History

Scratch Pad X

```
-- SELECT employee_gender, sector_name, sum(number_of_employees)
-- FROM processed_fact_table
-- GROUP BY employee_gender, sector_name

-- SLICE QUERY
SELECT *
FROM processed_fact_table
WHERE field_of_study = 'Mathematics, computer and information sciences [7]'
```

Data Output

Messages

Graph Visualiser X

Notifications

Dice Query 1:

Query

Query History

Scratch Pad X

```
-- SELECT employee_gender, sector_name, sum(number_of_employees)
-- FROM processed_fact_table
-- GROUP BY employee_gender, sector_name

-- SLICE QUERY
-- SELECT *
-- FROM processed_fact_table
-- WHERE field_of_study = 'Mathematics, computer and information sciences [7]'

-- DICE QUERIES
SELECT *
FROM processed_fact_table
WHERE year=2020 and field_of_study = 'Mathematics, computer and information sciences [7]' and sector_name = 'Professional, scientific and technical services [5]'

-- SELECT *
-- FROM processed_fact_table
-- WHERE year=2008 and field_of_study = 'Business, management and public administration [5]' and sector_name = 'Finance and insurance [52]' and

-- COMBINATION OLAP QUERIES
-- QUERY 1
-- SELECT sector_name, sum(gdp_value)
```

Data Output

Messages

Graph Visualiser X

Notifications

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	year	field_of_study	sector_name	employee_gender	age_group	graduate_gender	employment_status	number_of_employees	gdp_value	number
	bigint	text	text	character varying (255)	character varying (255)	character varying (255)	character varying (255)	numeric	numeric	numeric
1	2020	Mathematics, computer and information sciences [...]	Professional, scientific and technical services [5...]	Female	15 to 24 years	Male	Employed	49500	138817000000	
2	2020	Mathematics, computer and information sciences [...]	Professional, scientific and technical services [5...]	Female	15 to 24 years	Female	Employed	49500	138817000000	
3	2020	Mathematics, computer and information sciences [...]	Professional, scientific and technical services [5...]	Female	25 to 54 years	Male	Employed	501200	138817000000	
4	2020	Mathematics, computer and information sciences [...]	Professional, scientific and technical services [5...]	Female	25 to 54 years	Female	Employed	501200	138817000000	
5	2020	Mathematics, computer and information sciences [...]	Professional, scientific and technical services [5...]	Female	55 years and over	Male	Employed	125600	138817000000	
6	2020	Mathematics, computer and information sciences [...]	Professional, scientific and technical services [5...]	Female	55 years and over	Female	Employed	125600	138817000000	
7	2020	Mathematics, computer and information sciences [...]	Professional, scientific and technical services [5...]	Male	15 to 24 years	Male	Employed	57400	138817000000	
8	2020	Mathematics, computer and information sciences [...]	Professional, scientific and technical services [5...]	Male	15 to 24 years	Female	Employed	57400	138817000000	
9	2020	Mathematics, computer and information sciences [...]	Professional, scientific and technical services [5...]	Male	25 to 54 years	Male	Employed	632200	138817000000	
10	2020	Mathematics, computer and information sciences [...]	Professional, scientific and technical services [5...]	Male	25 to 54 years	Female	Employed	632200	138817000000	
11	2020	Mathematics, computer and information sciences [...]	Professional, scientific and technical services [5...]	Male	55 years and over	Male	Employed	195900	138817000000	
12	2020	Mathematics, computer and information sciences [...]	Professional, scientific and technical services [5...]	Male	55 years and over	Female	Employed	195900	138817000000	
13	2020	Mathematics, computer and information sciences [...]	Professional, scientific and technical services [5...]	Female	15 to 24 years	Male	Unemployed	4100	138817000000	

Total rows: 24 of 24 Query complete 00:00:00.460

Ln 49, Col 33

Dice Query 2:

Query Query History

Scratch Pad X

```
-- SELECT employee_gender,sector_name, sum(number_of_employees)
-- FROM processed_fact_table
-- GROUP BY employee_gender, sector_name

-- SLICE QUERY
-- SELECT *
-- FROM processed_fact_table
-- WHERE field_of_study = 'Mathematics, computer and information sciences [7]'
```

```
-- DICE QUERIES
-- SELECT *
-- FROM processed_fact_table
-- WHERE year=2008 and field_of_study = 'Mathematics, computer and information sciences [7]' and sector_name = 'Professional, scientific and technical [52]'
```

```
SELECT *
FROM processed_fact_table
WHERE year=2008 and field_of_study = 'Business, management and public administration [5]' and sector_name = 'Finance and insurance [52]' and employee_gender = 'Female'
```

```
-- COMBINATION OLAP QUERIES
-- QUERY 1
SELECT sector_name, sum(gdp_value)
```

Data Output Messages Graph Visualiser X Notifications

	year bigint	field_of_study text	sector_name text	employee_gender character varying (255)	age_group character varying (255)	graduate_gender character varying (255)	employment_status character varying (255)	number_of_employees numeric	gdp_value numeric	number_of_graduates numeric
1	2008	Business, management and public administration [...]	Finance and insurance [52]	Female	15 to 24 years	Male	Employed	40200	99827000000	73371.0
2	2008	Business, management and public administration [...]	Finance and insurance [52]	Female	15 to 24 years	Female	Employed	40200	99827000000	102933.0
3	2008	Business, management and public administration [...]	Finance and insurance [52]	Female	25 to 54 years	Male	Employed	377300	99827000000	73371.0
4	2008	Business, management and public administration [...]	Finance and insurance [52]	Female	25 to 54 years	Female	Employed	377300	99827000000	102933.0
5	2008	Business, management and public administration [...]	Finance and insurance [52]	Female	55 years and over	Male	Employed	58100	99827000000	73371.0
6	2008	Business, management and public administration [...]	Finance and insurance [52]	Female	55 years and over	Female	Employed	58100	99827000000	102933.0
7	2008	Business, management and public administration [...]	Finance and insurance [52]	Male	15 to 24 years	Male	Employed	21000	99827000000	73371.0
8	2008	Business, management and public administration [...]	Finance and insurance [52]	Male	15 to 24 years	Female	Employed	21000	99827000000	102933.0
9	2008	Business, management and public administration [...]	Finance and insurance [52]	Male	25 to 54 years	Male	Employed	234800	99827000000	73371.0
10	2008	Business, management and public administration [...]	Finance and insurance [52]	Male	25 to 54 years	Female	Employed	234800	99827000000	102933.0
11	2008	Business, management and public administration [...]	Finance and insurance [52]	Male	55 years and over	Male	Employed	43500	99827000000	73371.0
12	2008	Business, management and public administration [...]	Finance and insurance [52]	Male	55 years and over	Female	Employed	43500	99827000000	102933.0

Total rows: 12 of 12 Query complete 00:00:00.462

Ln 50, Col 1

Combined OLAP Query 1:

Query

Query History

```
43 -- FROM processed_fact_table
44 -- WHERE field_of_study = 'Mathematics, computer and information sciences [7]'
```

-- DICE QUERIES

```
46 -- SELECT *
47 -- FROM processed_fact_table
48 -- WHERE year=2020 and field_of_study = 'Mathematics, computer and information sciences [7]' and sector_name
49 -- SELECT *
50 -- FROM processed_fact_table
51 -- WHERE year=2008 and field_of_study = 'Business, management and public administration [5]' and sector_name =
52 -- COMBINATION OLAP QUERIES
53 -- QUERY 1
54 SELECT sector_name, sum(gdp_value)
55 FROM processed_fact_table
56 WHERE year = 2008
57 GROUP BY sector_name
58
```

Data Output

Messages

Graph Visualiser X

Notifications

	sector_name text	sum numeric
1	Information, culture and recreation [51, 71]	20815872000000
2	Agriculture, forestry, fishing and hunting [11]	9845472000000
3	Retail trade [44-45]	26958960000000
4	Utilities [22]	12635280000000
5	Public administration [91]	33878880000000
6	Construction [23]	37636368000000
7	Accommodation and food services [72]	10668672000000
8	Finance and insurance [52]	33541872000000
9	Professional, scientific and technical services [54]	27838272000000
10	Health care and social assistance [62]	34405056000000
11	Business, building and other support services [55, 5...	17958864000000
12	Mining, quarrying, and oil and gas extraction [21]	52687152000000
13	Transportation and warehousing [48-49]	21252000000000

Total rows: 17 of 17

Query complete 00:00:00.773

Combined OLAP Query 2:

Query

Query History

```

21 JOIN
22     dim_employee_demographic emp ON ft.employee_demographic_key = emp.employee_demographic_key
23 JOIN
24     dim_graduate_demographic grad ON ft.graduate_demographic_key = grad.graduate_demographic_key
25 JOIN
26     dim_employment_status emp_status ON ft.employment_status_key = emp_status.employment_key
27 ),
28
29 -- QUERY 2
30 drill_down_table AS (
31     SELECT year, employee_gender, sector_name, sum(number_of_employees)
32     FROM processed_fact_table
33     GROUP BY year, employee_gender, sector_name
34 )
35 SELECT employee_gender, sector_name, sum as number_of_employees
36 FROM drill_down_table
37 WHERE drill_down_table.year = 2008
38
39 -- QUERY 3
40 -- drill_down_table AS (

```

Data Output

Messages

Graph Visualiser X

Notifications

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	employee_gender character varying (255) 🔒	sector_name text 🔒	number_of_employees numeric 🔒
1	Female	Accommodation and food services [72]	19611200
2	Female	Agriculture, forestry, fishing and hunting [11]	3137540
3	Female	Business, building and other support services [55, 5...	9926000
4	Female	Construction [23]	4390400
5	Female	Educational services [61]	22052800
6	Female	Finance and insurance [52]	13562080
7	Female	Health care and social assistance [62]	44102800
8	Female	Information, culture and recreation [51, 71]	10231200
9	Female	Manufacturing [31-33]	16287600
10	Female	Mining, quarrying, and oil and gas extraction [21]	1492400
11	Female	Other services (except public administration) [81]	11737600
12	Female	Professional, scientific and technical services [54]	14462000
13	Female	Public administration [91]	13104000

Total rows: 34 of 34

Query complete 00:00:00.753

Combined OLAP Query 3:

Query	Query History
34	--)
35	-- SELECT employee_gender, sector_name, sum as number_of_employees
36	-- FROM drill_down_table
37	-- WHERE drill_down_table.year = 2008
38	
39	-- QUERY 3
40	drill_down_table AS (
41	SELECT year, graduate_gender, field_of_study, sum(number_of_graduates)
42	FROM processed_fact_table
43	GROUP BY year, graduate_gender, field_of_study
44)
45	SELECT graduate_gender, field_of_study, sum as number_of_graduates
46	FROM drill_down_table
47	WHERE drill_down_table.year = 2008
48	
49	-- QUERY 4
50	-- slice_table AS (
51	-- SELECT *
52	-- FROM processed_fact_table
53	-- WHERE year=2008
54	--)
55	-- SELECT employee_gender, sector_name, sum as number_of_employees
56	-- FROM slice_table
57	-- WHERE slice_table.year = 2008
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Query	Query History
39	-- QUERY 3
40	-- drill_down_table AS (
41	-- SELECT year, graduate_gender, field_of_study, sum(number_of_graduates)
42	-- FROM processed_fact_table
43	-- GROUP BY year,graduate_gender, field_of_study
44	--)
45	-- SELECT graduate_gender, field_of_study, sum as number_of_graduates
46	-- FROM drill_down_table
47	-- WHERE drill_down_table.year = 2008
48	
49	-- QUERY 4
50	slice_table AS (
51	SELECT *
52	FROM processed_fact_table
53	WHERE year=2008
54)
55	SELECT sector_name, employment_status, sum(number_of_employees) as number_of_people
56	FROM slice_table
57	GROUP BY sector_name,employment_status
58	ORDER BY sector_name, employment_status

Data Output	Messages	Graph Visualiser X	Notifications
<div> <div>≡</div> <div>📄</div> <div>▼</div> <div>📋</div> <div>▼</div> <div>🗑️</div> <div>🔍</div> <div>⬇️</div> <div>📈</div> </div>			
	sector_name text	employment_status character varying (255)	number_of_people numeric
1	Accommodation and food services [72]	Employed	30466800
2	Accommodation and food services [72]	Unemployed	2340800
3	Agriculture, forestry, fishing and hunting [11]	Employed	11074000
4	Agriculture, forestry, fishing and hunting [11]	Unemployed	824740
5	Business, building and other support services [55, 5...	Employed	19843600
6	Business, building and other support services [55, 5...	Unemployed	1870400
7	Construction [23]	Employed	35072800
8	Construction [23]	Unemployed	2648800
9	Educational services [61]	Employed	32116000
10	Educational services [61]	Unemployed	1145200
11	Finance and insurance [52]	Employed	21697200
12	Finance and insurance [52]	Unemployed	446880
13	Health care and social assistance [62]	Employed	52869600
Total rows: 34 of 34		Query complete 00:00:00.611	

Iceberg query:

Query Query History

```
1  -- ICEBERG QUERY
2  WITH gdp_per_industry AS (SELECT
3      dt.year,
4      ind.sector_name,
5      ft.gdp_value FROM fact_table ft
6  JOIN
7      dim_date dt ON ft.date_key = dt.date_key
8  JOIN
9      dim_industry ind ON ft.industry_key = ind.industry_key)
10
11 SELECT DISTINCT *
12 FROM gdp_per_industry
13 ORDER BY gdp_value DESC
14 LIMIT 10
15
16
17 -- WINDOWING QUERY
18 -- Total # of grads per field of study per gender between 2015 and 2020
19
20 -- WITH graduates_per_field_of_study AS (
```

Data Output Messages Graph Visualiser X Notifications

	year bigint	sector_name text	gdp_value numeric
1	2020	Real estate and rental and leasing [53]	293886000000
2	2019	Real estate and rental and leasing [53]	282688000000
3	2018	Real estate and rental and leasing [53]	267102000000
4	2017	Real estate and rental and leasing [53]	257949000000
5	2016	Real estate and rental and leasing [53]	249016000000
6	2015	Real estate and rental and leasing [53]	238235000000
7	2014	Real estate and rental and leasing [53]	228526000000
8	2018	Manufacturing [31-33]	220573000000
9	2013	Real estate and rental and leasing [53]	219018000000
10	2019	Manufacturing [31-33]	215153000000

Total rows: 10 of 10 Query complete 00:00:00.373

Windowing query:

QueryQuery History

37FROM

38(SELECT field_of_study, graduate_gender, sum(sum1) as total_graduates

39FROM (SELECT year, field_of_study, graduate_gender, sum(number_of_graduates) as sum1

40FROM graduates_per_field_of_study

41WHERE year >= 2015 AND year <= 2020

42GROUP BY year, field_of_study, graduate_gender) AS total_graduates_per_field_of_study

43GROUP BY field_of_study, graduate_gender

44) AS rankings_fields_of_study

45

46

47-- USING THE WINDOW CLAUSE

48-- WITH gdp_per_industry AS (SELECT

49-- dt.year,

50-- ind.sector_name,

51-- ft.gdp_value FROM fact_table ft

52-- JOIN

53-- dim_date dt ON ft.date_key = dt.date_key

54-- JOIN

55-- dim_industry ind ON ft.industry_key = ind.industry_key)

56

Data OutputMessagesGraph Visualiser XNotifications

	field_of_study text	graduate_gender character varying (255)	total_graduates numeric	field_rank bigint
1	Business, management and public administration [5]	Female	176748048.0	1
2	Health and related fields [10]	Female	155810304.0	2
3	Architecture, engineering and related technologies [8]	Male	146087460.0	3
4	Business, management and public administration [5]	Male	143909964.0	4
5	Social and behavioural sciences and law [4]	Female	143762472.0	5
6	Humanities [3]	Female	69838992.0	6
7	Education [1]	Female	55200564.0	7
8	Social and behavioural sciences and law [4]	Male	54968004.0	8
9	Physical and life sciences and technologies [6]	Female	47865744.0	9
10	Health and related fields [10]	Male	42226164.0	10
11	Humanities [3]	Male	40314276.0	11
12	Mathematics, computer and information sciences [7]	Male	38291004.0	12
13	Physical and life sciences and technologies [6]	Male	35836272.0	13

Total rows: 28 of 28

Query complete 00:00:00.386

Window clause query:

Query

Query History

44

--) AS rankings_fields_of_study

45

46

47

-- USING THE WINDOW CLAUSE

48

WITH gdp_per_industry AS (SELECT

49

dt.year,

50

ind.sector_name,

51

ft.gdp_value FROM fact_table ft

52

JOIN

53

dim_date dt ON ft.date_key = dt.date_key

54

JOIN

55

dim_industry ind ON ft.industry_key = ind.industry_key)

56

57

SELECT DISTINCT year, sector_name, avg(gdp_value) OVER W moving_average

58

FROM gdp_per_industry

59

WINDOW W AS (PARTITION BY sector_name

60

ORDER BY year

61

RANGE BETWEEN 1 PRECEDING AND 1 FOLLOWING

62

)

63

ORDER BY year ASC

Data Output

Messages

Graph Visualiser

X

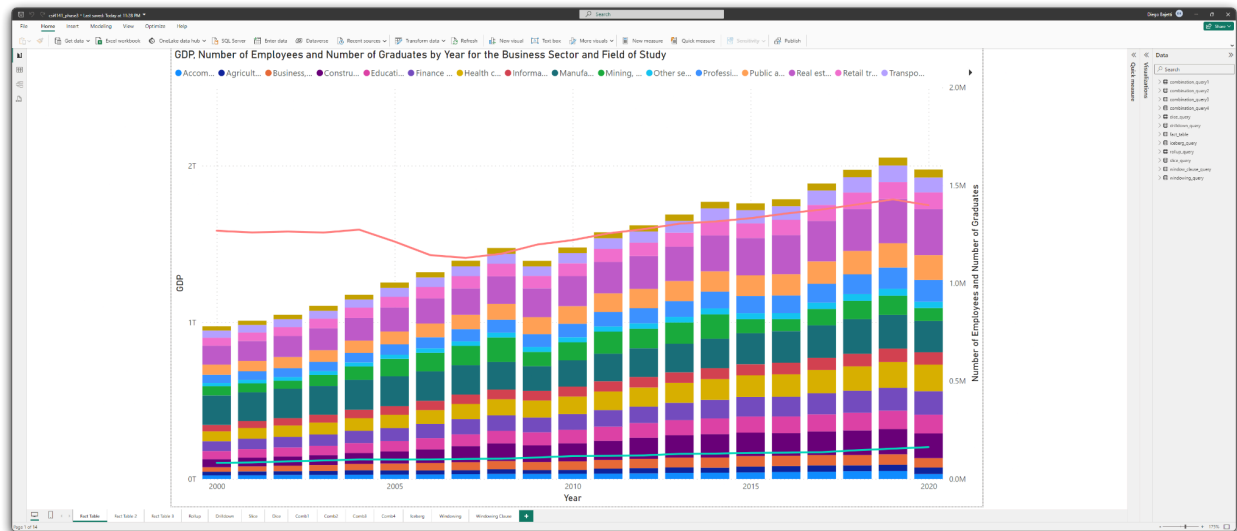
Notifications

	year bigint	sector_name text	moving_average numeric
1	2000	Real estate and rental and leasing [53]	123690500000.00000000
2	2000	Agriculture, forestry, fishing and hunting [11]	23673000000.00000000
3	2000	Mining, quarrying, and oil and gas extraction [21]	58049500000.00000000
4	2000	Transportation and warehousing [48-49]	47365000000.00000000
5	2000	Accommodation and food services [72]	23220500000.00000000
6	2000	Business, building and other support services [55, 5...	30610000000.00000000
7	2000	Construction [23]	53308500000.00000000
8	2000	Educational services [61]	53136500000.00000000
9	2000	Utilities [22]	26956500000.00000000
10	2000	Professional, scientific and technical services [54]	53310000000.00000000
11	2000	Other services (except public administration) [81]	21774500000.00000000
12	2000	Health care and social assistance [62]	65502000000.00000000
13	2000	Public administration [91]	66005500000.00000000

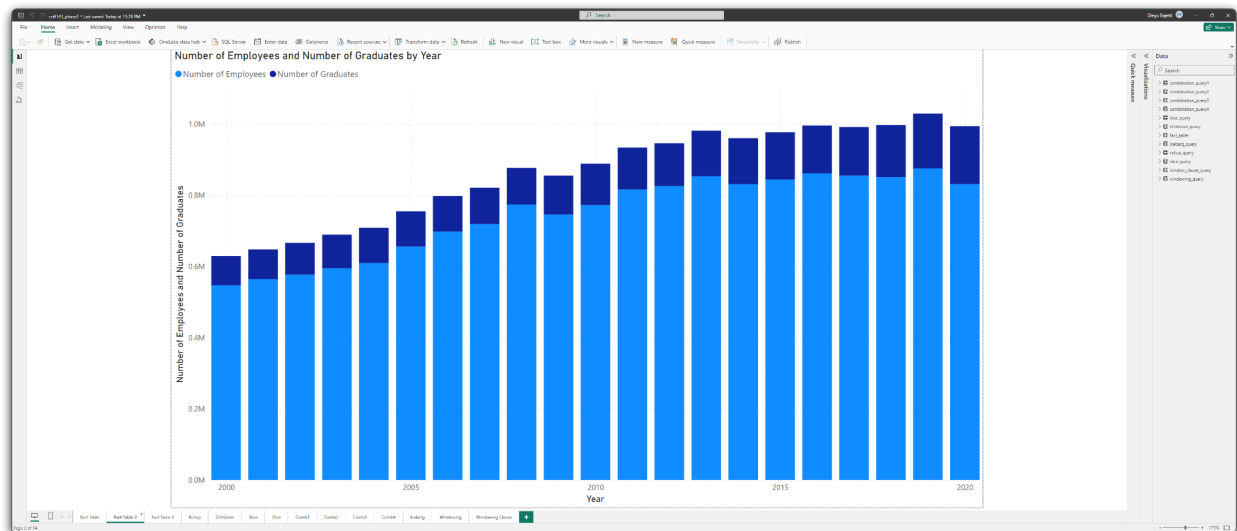
Total rows: 357 of 357

Query complete 00:00:00.479

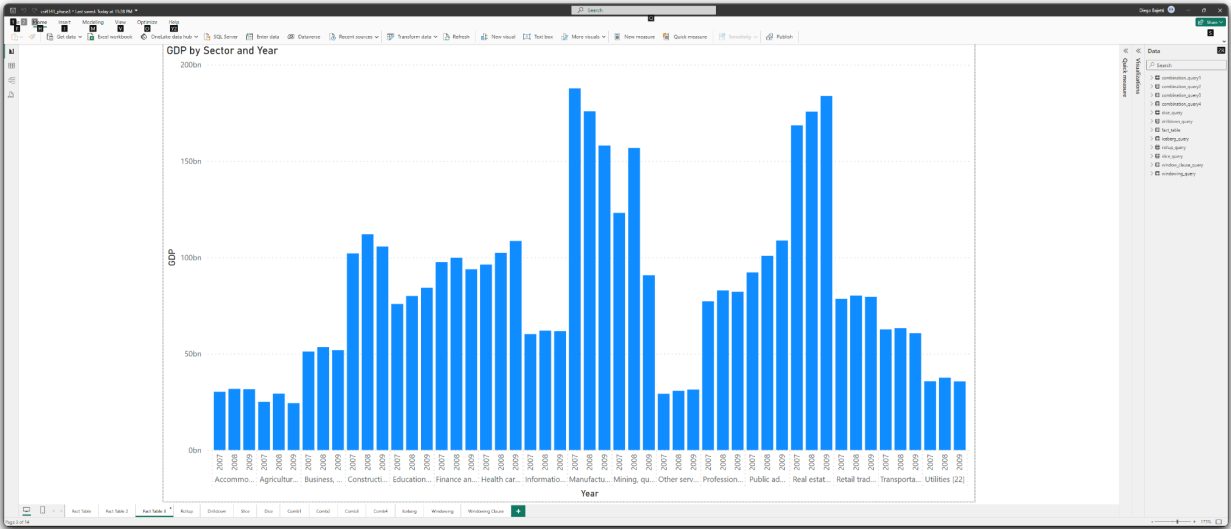
GDP, Number of Employees and Number of Graduates by Year for the Business Sector



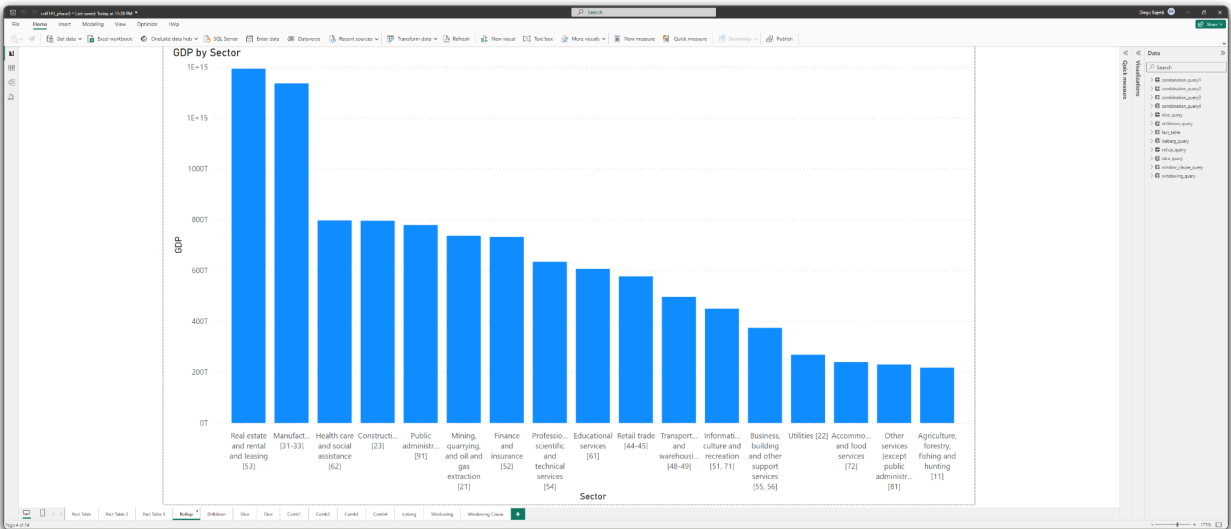
Number of Employees and Number of Graduates by Year



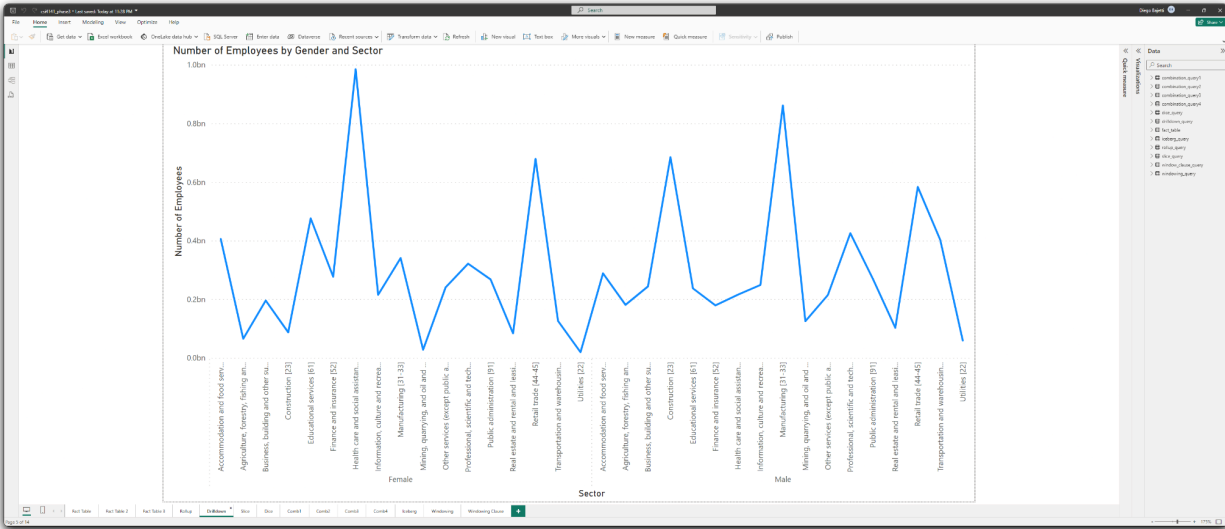
GDP by Sector and Year



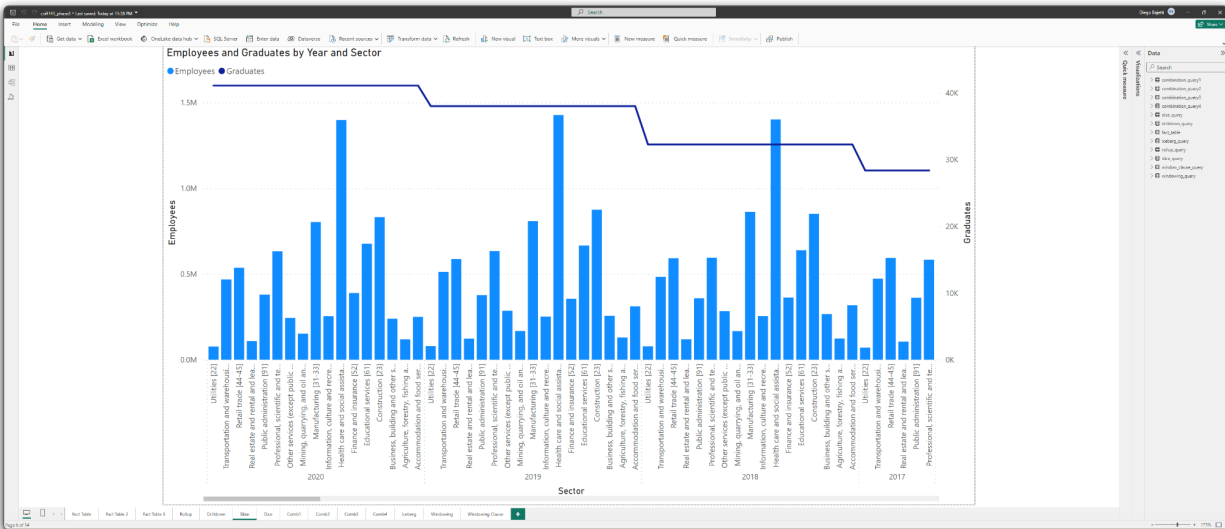
GDP by Sector



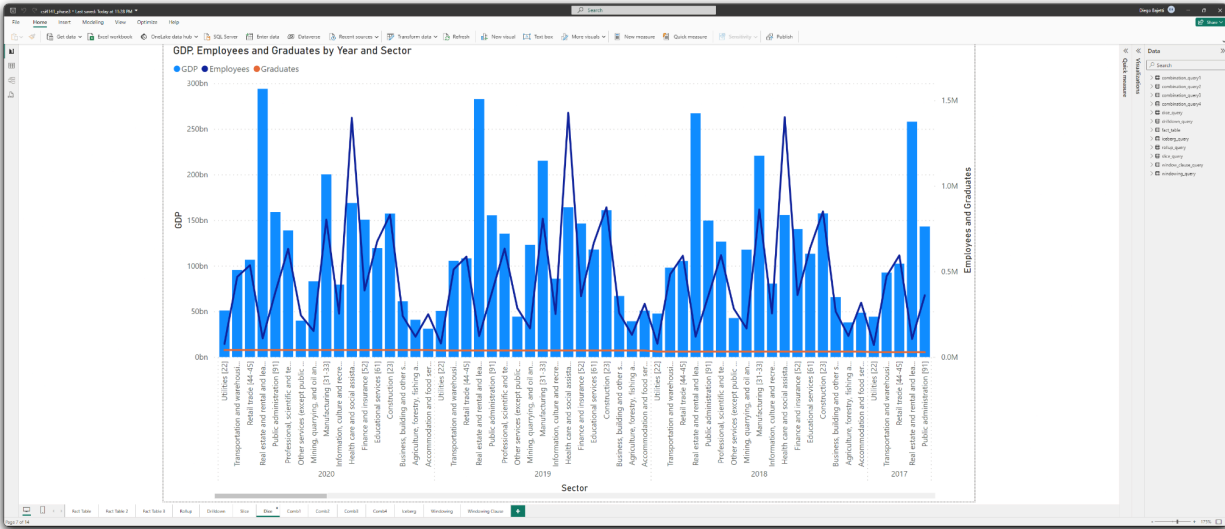
Number of Employees by Gender and Sector



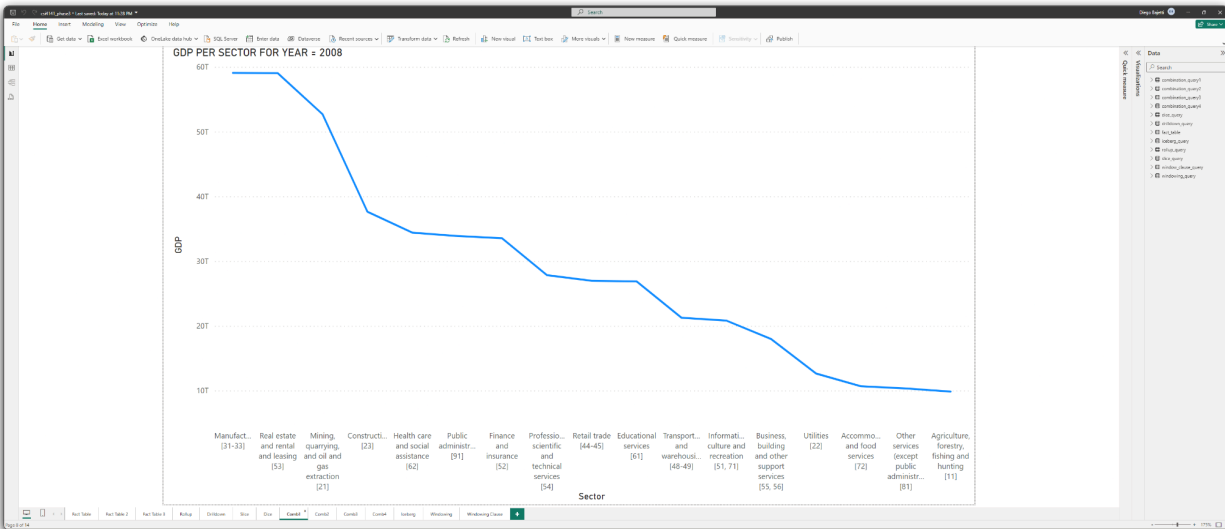
Employees and Graduates by Year and Sector



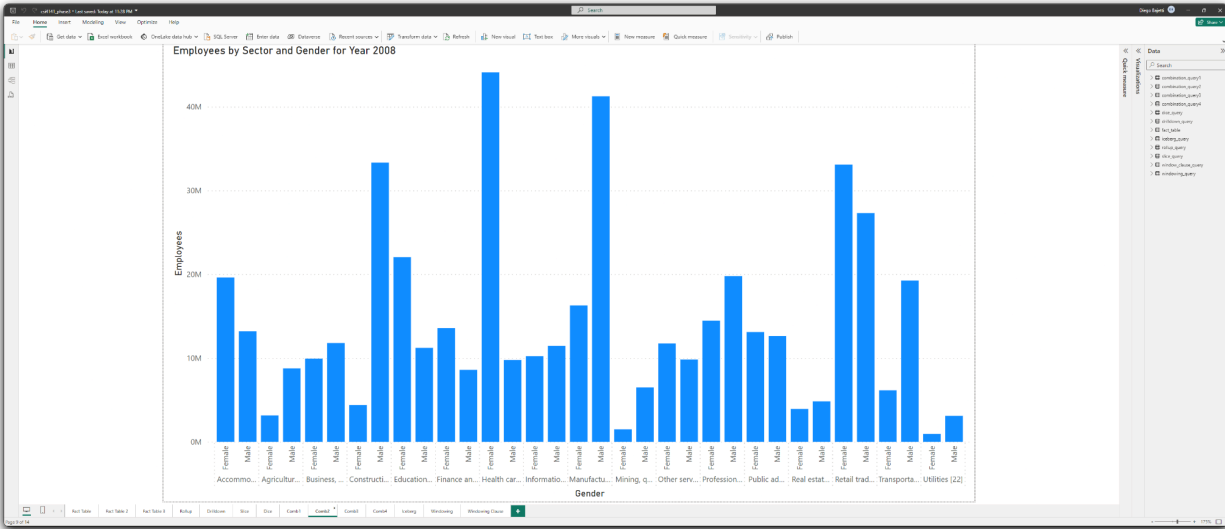
GDP, Employees and Graduates by Year and Sector



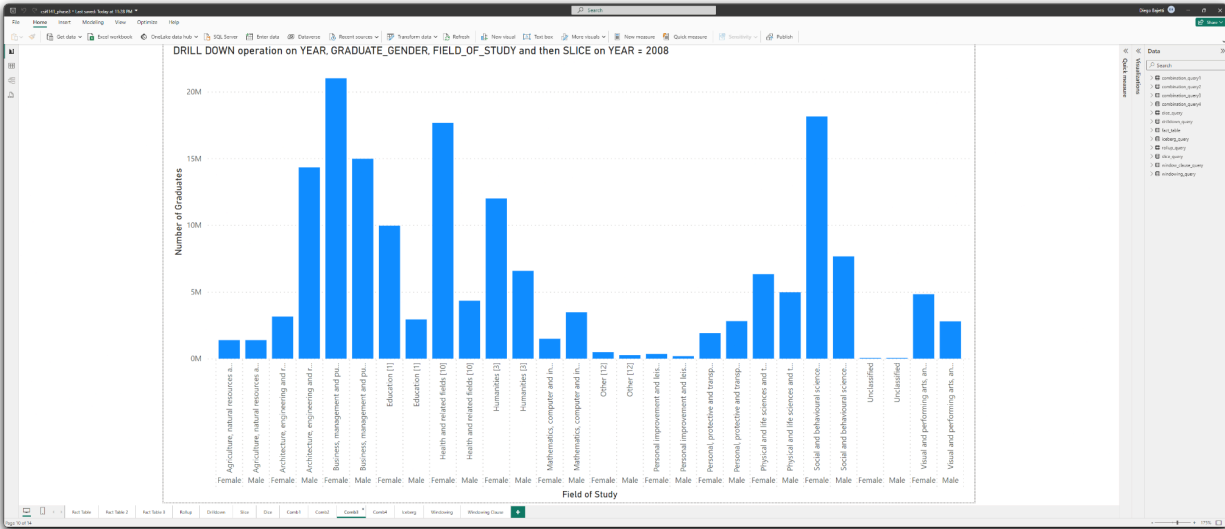
GDP PER SECTOR FOR YEAR = 2008



Employees by Sector and Gender for Year 2008



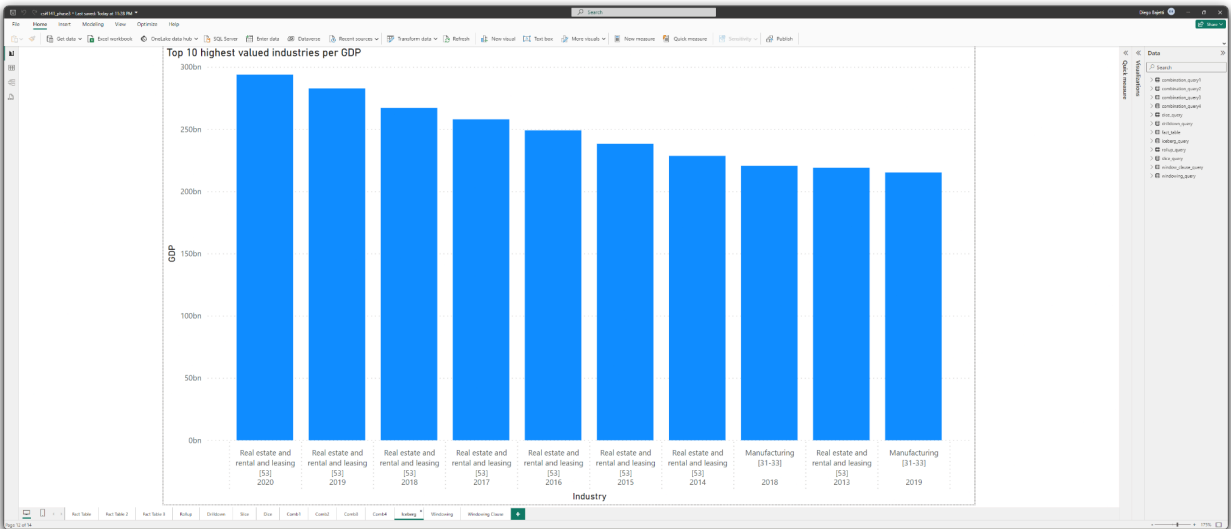
DRILL DOWN operation on Year, Gender, Field of Study and then Slice on Year = 2008



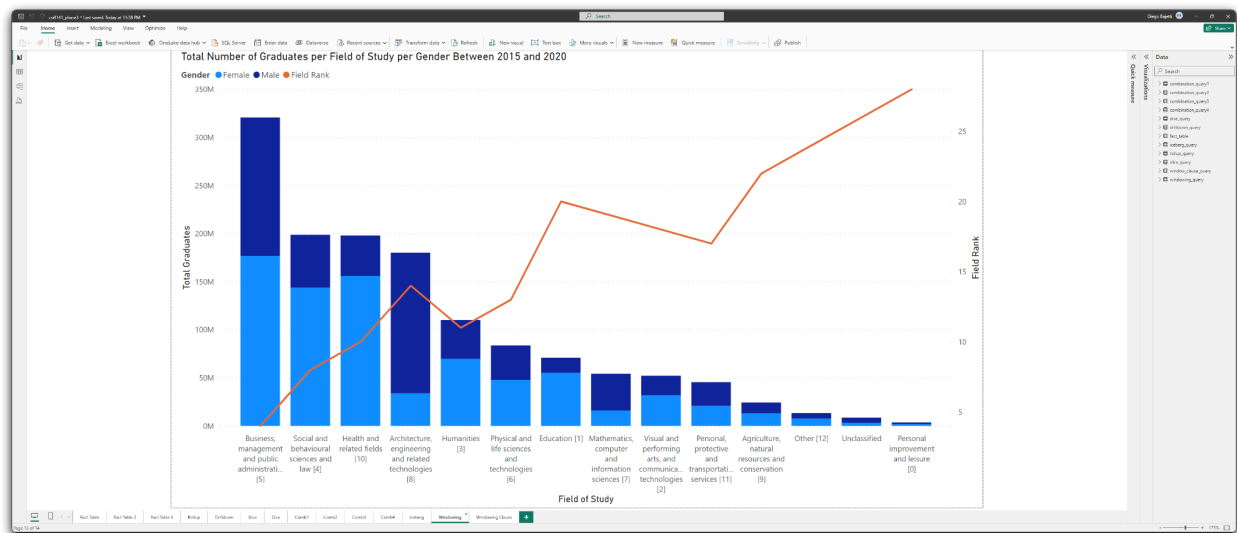
Number of People By Sector Name and Employment Status for Year 2008



Top 10 Highest Valued Industries per GDP



Total Number of Graduates per Field of Study per Gender Between 2015 and 2020



Moving Average of GDP per Industry over Three Years

