SQL PORTFOLIO PROJECT

TABLEAU/ POWER BI REPORTS IN SQL

Create Table:

```
create table hrdata
(
	emp_no int8 PRIMARY KEY,
	gender varchar(50) NOT NULL,
	marital_status varchar(50),
	age_band varchar(50),
	age int8,
	department varchar(50),
	education varchar(50),
	education_field varchar(50),
	job_role varchar(50),
	business_travel varchar(50),
	employee_count int8,
	attrition varchar(50),
	attrition_label varchar(50),
	job_satisfaction int8,
	active_employee int8
)
```

Import Data in Table Using Query:

```
COPY hrdata FROM 'C:\Users\rc\Desktop\Projects\Complete Project\SQL' DELIMITER ',' CSV HEADER;
```

Employee Count:

```
select sum(employee_count) as Employee_Count from hrdata;
```

	employee_count numeric
1	1470

Attrition Count:

select count(attrition) from hrdata where attrition='Yes';

	count bigint
1	237

Attrition Rate:

select
round (((select count(attrition) from hrdata where attrition='Yes')/
sum(employee_count)) * 100,2)
from hrdata;

	round numeric
1	16.12

Active Employees:

select sum(employee_count) - (select count(attrition) from hrdata where attrition='Yes') from hrdata;

	?column? numeric
1	1233

Average Age:

select round(avg(age),0) from hrdata;

	round numeric
1	37

Attrition by Gender:

select gender, count(attrition) as attrition_count from hrdata

where attrition='Yes'

group by gender

order by count(attrition) desc;

	gender character varying (50)	attrition_count bigint
1	Male	150
2	Female	87

Department Wise Attrition:

select department, count(attrition), round((cast (count(attrition) as numeric) /

(select count(attrition) from hrdata where attrition= 'Yes')) * 100, 2) as pct from hrdata

where attrition='Yes'

group by department

order by count(attrition) desc;

	department character varying (50)	count bigint	pct numeric
1	R&D	133	56.12
2	Sales	92	38.82
3	HR	12	5.06

No of Employees by Age Group:

select age, sum(employee_count) as employee_count from hrdata

group by age

order by age;

	age bigint	employee_count numeric
1	18	8
2	19	9
3	20	11
4	21	13
5	22	16
6	23	14
7	24	26
8	25	26
9	26	39
10	27	48
11	28	48
12	29	68

...

Education Field Wise Attrition:

select education_field, count(attrition) as attrition_count from hrdata

where attrition='Yes'

group by education_field

order by count(attrition) desc;

	education_field character varying (50)	attrition_count bigint
1	Life Sciences	89
2	Medical	63
3	Marketing	35
4	Technical Degree	32
5	Other	11
6	Human Resources	7

Attrition Rate by Gender for Different Age Groups:

select age_band, gender, count(attrition) as attrition,

round((cast(count(attrition) as numeric) / (select count(attrition) from hrdata where attrition = 'Yes')) * 100,2) as pct

from hrdata

where attrition = 'Yes'

group by age_band, gender

order by age_band, gender desc;

	age_band character varying (50)	gender character varying (50)	attrition bigint	pct numeric
1	25 - 34	Male	69	29.11
2	25 - 34	Female	43	18.14
3	35 - 44	Male	37	15.61
4	35 - 44	Female	14	5.91
5	45 - 54	Male	16	6.75
6	45 - 54	Female	9	3.80
7	Over 55	Male	8	3.38
8	Over 55	Female	3	1.27
9	Under 25	Male	20	8.44
10	Under 25	Female	18	7.59

Job Satisfaction Rating:

- - Activating the cosstab() function

CREATE EXTENSION IF NOT EXISTS tablefunc;

- - Then

```
select *
from crosstab(
  'select job_role, job_satisfaction, sum(employee_count)
   from hrdata
   group by job_role, job_satisfaction
   order by job_role, job_satisfaction'
        ) as ct(job_role varchar(50), one numeric, two numeric, three numeric, four numeric)
order by job_role;
```

	job_role character varying (50)	one numeric	two numeric	three numeric	four numeric
1	Healthcare Representative	26	19	43	43
2	Human Resources	10	16	13	13
3	Laboratory Technician	56	48	75	80
4	Manager	21	21	27	33
5	Manufacturing Director	26	32	49	38
6	Research Director	15	16	27	22
7	Research Scientist	54	53	90	95
8	Sales Executive	69	54	91	112
9	Sales Representative	12	21	27	23