HR Analytics SQL Queries

```sql
create database hranalytics;
use hranalytics;
select count(*) from hrdataan;

select count(EmployeeNumber) from hrdataan;

#1 Find the department wise average attrition rate
```

Result Grid | Filter Rows: | Export: | Wrap Cell Content:

count(*)
5043

```sql

#1 Find the department wise average attrition rate

select Department, round(avg(numofyes) * 100, 2) as Average_attrition_percentage
from hrdataan
group by department;

```

Result Grid | Filter Rows: | Export: | Wrap Cell Content:

Department	Average_attrition_percentage
Software	51.03
Hardware	51.29
Human Resources	45.44
Support	49.65
Sales	50.83
Research & Development	51.48

```sql

# 2 Find the average hourly rate of male research scientist

select JobRole, Gender , avg(hourlyrate)  as average_hourly_rate from hrdataan
where JobRole = "Research Scientist" and Gender = "Male"
group by JobRole;

```

Result Grid | Filter Rows: | Export: | Wrap Cell Content:

JobRole	Gender	average_hourly_rate
Research Scientist	Male	110.4509

```sql
#4 Find the average working years for each department

select Department, avg(TotalWorkingYears) as averageWorkingYears
from hrdataan
group by Department
order by averageWorkingYears asc;
```

Result Grid | Filter Rows: | Export: | Wrap Cell Content:

Department	averageWorkingYears
Support	19.7887
Research & Development	20.4864
Hardware	20.7811
Human Resources	20.9738
Sales	21.1651
Software	21.2050

```sql
#5 Find the average attrition rate for year since last promotion

select RANGEOFYEARS, ROUND(AVG(numofyes) * 100, 2) AS average_attrition_percentage
from hrdataan
group by RANGEOFYEARS
order by average_attrition_percentage asc;
```

Result Grid | Filter Rows: | Export: | Wrap Cell Content:

RANGEOFYEARS	average_attrition_percentage
35-40	42.11
15-19	47.62
30-34	48.98
10-14	49.40
1-4	49.72
20-24	52.81
25-29	53.60
5-9	54.83

```sql
#6 Find the jobrole vs worklifebalance

select JobRole, sum(WorkLifeBalance) AS WorkLifeBalance
from hrdataan
group by JobRole
order by  WorkLifeBalance asc;
```

Result Grid | Filter Rows: | Export: | Wrap Cell Content:

JobRole	WorkLifeBalance
Laboratory Technician	1139
Research Director	1227
Manager	1235
Developer	1250
Research Scientist	1259
Manufacturing Director	1285
Human Resources	1285
Sales Representative	1304
Healthcare Representative	1321
Sales Executive	1378

```
#7 Find the count of employee based on educational fields

select EducationField, sum(EmployeeCount) AS Totalemployee
from hrdataan
group by EducationField
order by Totalemployee asc;
```

Result Grid | Filter Rows: | Export: | Wrap Cell Content:

JobRole	WorkLifeBalance
Laboratory Technician	1139
Research Director	1227
Manager	1235
Developer	1250
Research Scientist	1259
Manufacturing Director	1285
Human Resources	1285
Sales Representative	1304
Healthcare Representative	1321
Sales Executive	1378

```
-- 9 Employee Count by Job Role and Gender
SELECT JobRole, Gender, COUNT(*) AS EmployeeCount
FROM hrdataan
GROUP BY JobRole, Gender
ORDER BY JobRole, Gender;
```

Result Grid | Filter Rows: | Export: | Wrap Cell Content:

JobRole	Gender	EmployeeCount
Developer	Female	262
Developer	Male	254
Healthcare Representative	Female	265
Healthcare Representative	Male	255
Human Resources	Female	259
Human Resources	Male	245
Laboratory Technician	Female	253
Laboratory Technician	Male	216
Manager	Female	241
Manager	Male	248
Manufacturing Director	Female	256
Manufacturing Director	Male	253

Result 9

```sql
-- 10 Top 5 Highest Paid Job Roles (Based on Monthly Income)
SELECT JobRole, ROUND(AVG(MonthlyIncome), 2) AS AverageMonthlyIncome
FROM hrdataan
GROUP BY JobRole
ORDER BY AverageMonthlyIncome DESC
LIMIT 5;
```

Result Grid | Filter Rows: | Export: | Wrap Cell Content:

JobRole	AverageMonthlyIncome
Research Scientist	27105.65
Manufacturing Director	26999.47
Research Director	26549.76
Healthcare Representative	26337.80
Sales Executive	26332.20

```sql
-- 11 Attrition Rate by Education Field
SELECT EducationField,
       CONCAT(ROUND(AVG(CASE WHEN Attrition = 'Yes' THEN 1 ELSE 0 END) * 100, 2), '%') AS AttritionRate
FROM hrdataan
GROUP BY EducationField;
```

Result Grid | Filter Rows: | Export: | Wrap Cell Content:

EducationField	AttritionRate
Medical	51.41%
Life Sciences	46.34%
Human Resources	49.94%
Technical Degree	51.34%
Marketing	51.10%
Other	49.77%

```sql
-- 12 Percentage of Employees with Overtime
SELECT CONCAT(ROUND(SUM(CASE WHEN OverTime = 'Yes' THEN 1 ELSE 0 END)*100.0
/ COUNT(*), 2), '%') AS OvertimePercentage
FROM hrdataan;
```

Result Grid | Filter Rows: | Export: | Wrap Cell Content:

OvertimePercentage
49.77%

```sql
-- 13 Employees with Above-Average Monthly Income
SELECT EmployeeNumber,MonthlyIncome
FROM hrdataan
WHERE MonthlyIncome > (SELECT AVG(MonthlyIncome) FROM hrdataan);

-- 14 Rank Employees by Income Within Each Department
```

Result Grid | Filter Rows: | Export: | Wrap Cell Content: | Fetch rows:

EmployeeNumber	MonthlyIncome
1	42682
6	41552
2	45252
3	46149
8	28555
4	27150
13	34153
14	47844
18	47968
23	30597
27	31621
37	40937

hrdataan 13

```sql
-- 14 Rank Employees by Income Within Each Department
SELECT EmployeeNumber, Department, MonthlyIncome,
       RANK() OVER (PARTITION BY Department ORDER BY MonthlyIncome DESC) AS IncomeRank
FROM hrdataan;

-- 15 Employees with Above-Average Monthly Income (Monthly Income)
  SELECT EmployeeNumber, MonthlyIncome
FROM hrdataan
```

Result Grid | Filter Rows: | Export: | Wrap Cell Content: | Fetch rows:

EmployeeNumber	Department	MonthlyIncome	IncomeRank
8627	Hardware	50984	1
1493	Hardware	50960	2
1615	Hardware	50941	3
4899	Hardware	50932	4
4996	Hardware	50780	5
530	Hardware	50737	6
1760	Hardware	50720	7
2939	Hardware	50568	8
1279	Hardware	50521	9
11075	Hardware	50441	10
2260	Hardware	50349	11
7493	Hardware	50319	12

```sql
-- 15 Employees with Above-Average Monthly Income (Monthly Income)
SELECT EmployeeNumber, MonthlyIncome
FROM hrdataan
WHERE MonthlyIncome > (
    SELECT AVG(MonthlyIncome)
    FROM hrdataan);
```

Result Grid | Filter Rows: | Export: | Wrap Cell Content: | Fetch rows:

EmployeeNumber	MonthlyIncome
1	42682
6	41552
2	45252
3	46149
8	28555
4	27150
13	34153
14	47844
18	47968
23	30597
27	31621
37	40937

```sql
-- 16 Average Monthly Income by Job Role and Gender
SELECT JobRole, Gender, ROUND(AVG(MonthlyIncome), 2) AS AvgIncome
FROM hrdataan
GROUP BY JobRole, Gender;

-- 17 Percentage of Attrition by Job Role
```

Result Grid | Filter Rows: | Export: | Wrap Cell Content:

JobRole	Gender	AvgIncome
Developer	Male	25262.14
Research Director	Female	26510.04
Healthcare Representative	Female	25829.57
Sales Executive	Female	25744.67
Manufacturing Director	Female	27226.38
Human Resources	Male	25779.78
Human Resources	Female	24910.83
Manager	Male	25283.95
Developer	Female	26706.44
Manager	Female	25820.03
Sales Representative	Female	25650.18
Sales Representative	Male	26039.02

```sql
-- 17 Percentage of Attrition by Job Role
SELECT JobRole,
       CONCAT(ROUND(AVG(CASE WHEN Attrition = 'Yes' THEN 1 ELSE 0 END) * 100, 2), '%') AS AttritionRate
FROM hrdataan
GROUP BY JobRole;

-- 18 Departments with Above-Average Attrition Rate (Subquery)
SELECT Department
```

Result Grid | Filter Rows: | Export: | Wrap Cell Content:

JobRole	AttritionRate
Developer	49.61%
Research Director	49.18%
Healthcare Representative	52.50%
Sales Executive	50.46%
Manufacturing Director	47.15%
Human Resources	52.58%
Manager	50.31%
Sales Representative	49.22%
Research Scientist	51.33%
Laboratory Technician	47.33%

```sql
-- 19 Top 3 Highest-Paid Employees per Department (CTE)
WITH RankedIncomes AS (
    SELECT EmployeeNumber, Department, MonthlyIncome,
           DENSE_RANK() OVER (PARTITION BY Department ORDER BY MonthlyIncome DESC) AS rnk
    FROM hrdataan
)
SELECT EmployeeNumber, Department, MonthlyIncome
FROM RankedIncomes
WHERE rnk <= 3;
```

Result Grid | Filter Rows: | Export: | Wrap Cell Content:

EmployeeNumber	Department	MonthlyIncome
8627	Hardware	50984
1493	Hardware	50960
1615	Hardware	50941
5479	Human Resources	50971
6487	Human Resources	50891
577	Human Resources	50852
1603	Research & Development	50869
4870	Research & Development	50809
8679	Research & Development	50799
524	Sales	50999
7929	Sales	50987
201	Sales	50986

Result 15

```sql
-- 20 Employees With Income Below Department Average
SELECT a.EmployeeNumber, a.Department, a.MonthlyIncome
FROM hrdataan a
JOIN (
    SELECT Department, AVG(MonthlyIncome) AS dept_avg
    FROM hrdataan
    GROUP BY Department
) b ON a.Department = b.Department
WHERE a.MonthlyIncome < b.dept_avg;
```

Result Grid | Filter Rows: | Export: | Wrap Cell Content: | Fetch rows:

EmployeeNumber	Department	MonthlyIncome
11832	Software	2985
11804	Software	4471
2856	Software	8940
11757	Software	2278
11702	Software	19866
11645	Software	8137
2795	Software	22727
2784	Software	15609
11479	Software	11513
2769	Software	23233
11335	Software	3961
11334	Software	20505

```sql
-- 21 DEPARTMENT WISE NO. OF EMPLOYEES
SELECT DEPARTMENT, SUM(EMPLOYEECOUNT) AS EMP_COUNT
FROM hrdataan
GROUP BY DEPARTMENT;
```

Result Grid | Filter Rows: | Export: | Wrap Cell Content:

DEPARTMENT	EMP_COUNT
Software	878
Hardware	813
Human Resources	801
Support	866
Sales	842
Research & Development	843

```sql
-- 22 GENDER BASED PERCENTAGE OF EMPLOYEE
select gender,format((count(gender) * 100.0 / (select count(*) from hrdataan)),2)
as 'employee %'
from hrdataan
group by gender;
```

Result Grid | Filter Rows: | Export: | Wrap Cell Content:

gender	employee %
Male	48.70
Female	51.30

```sql
-- 23 DEPARTMENT and JOBROLE WISE JOB SATISFACTION
SELECT JOBROLE,AVG(JOBSATISFACTION) AS AVERAGEJOBSATISFACTION
FROM hrdataan
GROUP BY JOBROLE;

-- 24 ATTRITION BY MARITAL STATUS
```

Result Grid | Filter Rows: | Export: | Wrap Cell Content:

JOBROLE	AVERAGEJOBSATISFACTION
Developer	2.4012
Research Director	2.4467
Healthcare Representative	2.4981
Sales Executive	2.4587
Manufacturing Director	2.4578
Human Resources	2.4782
Manager	2.5726
Sales Representative	2.4283
Research Scientist	2.5010
Laboratory Technician	2.4840

Don't Limit

```sql
-- 24 ATTRITION BY MARITAL STATUS
SELECT MARITALSTATUS,GENDER,
CONCAT(FORMAT((COUNT(CASE WHEN ATTRITION='YES' THEN 1 END)*100.0 / COUNT(*)),2),'%'
AS ATTRITIONRATE
FROM hrdataan
GROUP BY MaritalStatus, GENDER;
```

Result Grid | Filter Rows: | Export: | Wrap Cell Content:

MARITALSTATUS	GENDER	ATTRITIONRATE
Married	Male	49.33%
Married	Female	49.82%
Single	Female	51.35%
Divorced	Female	50.47%
Single	Male	48.75%
Divorced	Male	50.06%

Result Grid
Form Editor
Field