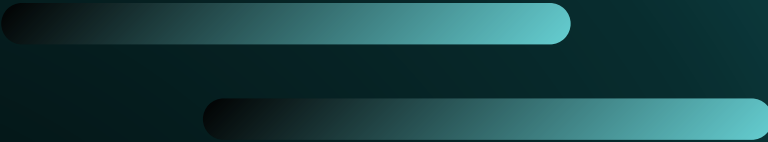


# HR DATA ANALYSIS USING SQL

Two horizontal bars with a teal-to-black gradient, positioned to the right of the word 'SQL'.

Overview of the project and the key  
objectives of HR data analysis using SQL



Two horizontal bars with a teal-to-black gradient, positioned below the text.



## Team Members

- Shiva ram
- Snehitha
- Sai ram
- Uday
- Abhijeet M.V.
- Ajinkya Jadhav
- Ratnesh

```
-- Average Attrition Rate for All Departments
SELECT
    Department,
    ROUND(SUM(CASE WHEN Attrition='Yes' THEN 1 ELSE 0 END) / COUNT(*) * 100, 2) AS Avg_Attrition_Rate
FROM hr_combined
GROUP BY Department;
```

Result Grid     Filter Rows: <input type="text"/>		
	Department	Avg_Attrition_Rate
	Software	50.54
	Human Resources	49.86
	Sales	50.02
	Support	50.19
	Hardware	49.44
	Research & Development	51.21

```
-- Average Hourly Rate of Male Research Scientists
SELECT
    JobRole,
    Gender,
    ROUND(AVG(HourlyRate), 2) AS Avg_HourlyRate
FROM hr_combined
WHERE Gender='Male' AND JobRole='Research Scientist'
GROUP BY JobRole, Gender;
```

Result Grid			
	JobRole	Gender	Avg_HourlyRate
	Research Scientist	Male	114.45

-- Attrition Rate vs Monthly Income Stats

• SELECT

monthalyincomegroup,

COUNT(\*) AS Total\_Employees,

SUM(CASE WHEN Attrition='Yes' THEN 1 ELSE 0 END) AS Total\_Attrition,

ROUND(SUM(CASE WHEN Attrition='Yes' THEN 1 ELSE 0 END)/COUNT(\*)\*100, 2) AS Attrition\_Rate

FROM hr\_combined

GROUP BY monthalyincomegroup

ORDER BY monthalyincomegroup;

Result Grid



Filter Rows:

Export:





Wrap Cell Cont

	monthalyincomegroup	Total_Employees	Total_Attrition	Attrition_Rate
▶	0-4999	4004	2016	50.35
	10000-14999	4938	2481	50.24
	15000-19999	4942	2449	49.55
	20000-29999	10090	5060	50.15
	30000-39999	10094	5028	49.81
	40000-49999	9956	5062	50.84

Result 9 ✕

```
-- Average Working Years for Each Department
SELECT
    Department,
    ROUND(AVG(TotalWorkingYears), 2) AS Avg_WorkingYears
FROM hr_combined
GROUP BY Department;
```





Result Grid     Filter Rows: <input type="text"/>		
	Department	Avg_WorkingYears
	Software	20.65
	Human Resources	20.45
	Sales	20.62
	Support	20.48
	Hardware	20.48
	Research & Development	20.30
Result 10 ✕		

```
-- Job Role vs Work-Life Balance

SELECT
    JobRole,
    ROUND(AVG(WorkLifeBalance), 2) AS Avg_WorkLifeBalance
FROM hr_combined
GROUP BY JobRole
ORDER BY Avg_WorkLifeBalance DESC;
```

Result Grid			Filter Rows:	Export
	JobRole	Avg_WorkLifeBalance		
▶	Developer	2.51		
	Healthcare Representative	2.51		
	Human Resources	2.51		
	Research Scientist	2.51		
	Manufacturing Director	2.50		
	Manager	2.50		
Result 11			×	

```
-- Attrition Rate vs Years Since Last Promotion
SELECT
    YearsSinceLastPromotionGroup,
    COUNT(*) AS Total_Employees,
    SUM(CASE WHEN Attrition='Yes' THEN 1 ELSE 0 END) AS Total_Attrition,
    ROUND(SUM(CASE WHEN Attrition='Yes' THEN 1 ELSE 0 END)/COUNT(*)*100, 2) AS Attrition_Rate
FROM hr_combined
GROUP BY YearsSinceLastPromotionGroup
ORDER BY YearsSinceLastPromotionGroup;
```

Result Grid   Filter Rows: <input type="text"/>   Export:    Wrap Cell Content: 				
	YearsSinceLastPromotionGroup	Total_Employees	Total_Attrition	Attrition_Rate
▶	0-2 Years	19556	9800	50.11
	11-20 Years	6878	3428	49.84
	21-30 Years	1660	846	50.96
	3-5 Years	12080	6105	50.54
	31-40 Years	222	113	50.90
	6-10 Years	9604	4813	50.11

Result 12 ✕



# Insights & Conclusions

Key takeaways from the SQL analysis:

- Identified patterns in attrition.
- Understood work-life balance variations by role.
- Found relationships between income, promotions, and attrition.