

POWER BI — HR ANALYTICS PROJECT OVERVIEW (FULL BLUEPRINT)

PROJECT GOAL

Build a complete HR Analytics Dashboard that explains:

- ✓ Attrition Analysis
 - ✓ Salary, Performance & Experience Insights
 - ✓ Demographics (Age, Department, Job Role)
 - ✓ Employee Satisfaction & Work-Life Balance
 - ✓ Predictive Factors Behind Attrition
-

1. DATA MODEL DESIGN

Main Table: HR_Analytics

No relationship tables present — so sab kaam isi single table me hoga.

Recommended:

- Create **Date Table** (if trend analysis needed)
- Create supporting lookup tables:
 - Department Table
 - JobRole Table
 - EducationField Table

(But optional)

2. RECOMMENDED CALCULATED COLUMNS (for better reporting)

(A) Attrition Flag (0/1)

Use in charts & numeric analysis.

AttritionFlag = IF(HR_Analytics[Attrition] = "Yes", 1, 0)

(B) Overtime Flag

OvertimeFlag = IF(HR_Analytics[OverTime] = "Yes", 1, 0)

(C) Working Experience Band

ExperienceBand =

SWITCH(TRUE(),

 HR_Analytics[TotalWorkingYears] <= 3, "0-3",

```
    HR_Analytics[TotalWorkingYears] <= 7, "4-7",  
    HR_Analytics[TotalWorkingYears] <= 12, "8-12",  
    "12+"  
)
```

(D) Monthly Income Band

```
IncomeBand =  
SWITCH(TRUE(),  
    HR_Analytics[MonthlyIncome] < 5000, "Low",  
    HR_Analytics[MonthlyIncome] < 10000, "Medium",  
    "High"  
)
```

(E) Distance Band

```
DistanceBand =  
IF(HR_Analytics[DistanceFromHome] < 5, "Near",  
IF(HR_Analytics[DistanceFromHome] < 15, "Medium", "Far"))
```

3. ALL POSSIBLE MEASURES (FULL LIST YOU CAN DIRECTLY USE)

★ Core Measures

```
Total Employees = COUNTROWS(HR_Analytics)  
Attrition Count = CALCULATE(COUNTROWS(HR_Analytics), HR_Analytics[Attrition] = "Yes")  
Attrition Rate = DIVIDE([Attrition Count], [Total Employees])  
Active Employees = [Total Employees] - [Attrition Count]
```

★ Salary Measures

```
Total Salary = SUM(HR_Analytics[MonthlyIncome])  
Average Salary = AVERAGE(HR_Analytics[MonthlyIncome])  
Median Salary = MEDIAN(HR_Analytics[MonthlyIncome])  
Salary Hike Average = AVERAGE(HR_Analytics[PercentSalaryHike])
```

★ Work Satisfaction Measures

```
Avg Job Satisfaction = AVERAGE(HR_Analytics[JobSatisfaction])
```

Avg Environment Satisfaction = AVERAGE(HR_Analytics[EnvironmentSatisfaction])

Avg Work Life Balance = AVERAGE(HR_Analytics[WorkLifeBalance])

Avg Relationship Satisfaction = AVERAGE(HR_Analytics[RelationshipSatisfaction])

⭐ Experience Measures

Avg Experience = AVERAGE(HR_Analytics[TotalWorkingYears])

Avg Years At Company = AVERAGE(HR_Analytics[YearsAtCompany])

Avg Years With Manager = AVERAGE(HR_Analytics[YearsWithCurrManager])

⭐ Overtime Impact Measures

Overtime Employee Count =

CALCULATE(COUNTROWS(HR_Analytics), HR_Analytics[OverTime] = "Yes")

Attrition Overtime Count =

CALCULATE([Attrition Count], HR_Analytics[OverTime] = "Yes")

Overtime Attrition Rate =

DIVIDE([Attrition Overtime Count], [Overtime Employee Count])

⭐ Department Wise Measures

Department Attrition =

CALCULATE([Attrition Count], ALLEXCEPT(HR_Analytics, HR_Analytics[Department]))

Department Attrition Rate =

DIVIDE([Department Attrition], CALCULATE([Total Employees], ALLEXCEPT(HR_Analytics, HR_Analytics[Department])))

🧠 4. DAX QUERIES (for DAX Query View — Tabular Results)

You can run these in **DAX Query View** to see tables directly.

(A) Attrition Summary Table

EVALUATE

SUMMARIZECOLUMNS(

HR_Analytics[Department],

```
    HR_Analytics[JobRole],  
    "Total Employees", [Total Employees],  
    "Attrition Count", [Attrition Count],  
    "Attrition Rate", [Attrition Rate]  
)  
  
ORDER BY [Attrition Rate] DESC
```

(B) Salary Statistics by Job Role

```
EVALUATE  
  
SUMMARIZECOLUMNS(  
    HR_Analytics[JobRole],  
    "Avg Salary", [Average Salary],  
    "Median Salary", [Median Salary],  
    "Salary Hike Avg", [Salary Hike Average]  
)  
  
ORDER BY [Avg Salary] DESC
```

(C) Satisfaction Insights by Department

```
EVALUATE  
  
SUMMARIZECOLUMNS(  
    HR_Analytics[Department],  
    "Job Satisfaction", [Avg Job Satisfaction],  
    "Environment Satisfaction", [Avg Environment Satisfaction],  
    "Work Life Balance", [Avg Work Life Balance]  
)  
  
ORDER BY [Work Life Balance] ASC
```

(D) Attrition Drivers Analysis

```
EVALUATE  
  
SUMMARIZECOLUMNS(  
    HR_Analytics[OverTime],
```

```
    HR_Analytics[DistanceBand],  
    HR_Analytics[IncomeBand],  
    "Attrition", [Attrition Count],  
    "Attrition Rate", [Attrition Rate]  
)  


---


```

5. Recommended Dashboard Visuals

Page 1 — Executive Summary

- KPI cards: Total Employees, Attrition Rate, Active Employees
- Donut: Attrition Yes/No
- Bar: Attrition by Department
- Column: Salary vs Attrition

Page 2 — Demographic Analysis

- Clustered bar: Attrition by AgeGroup
- Stacked: Gender vs Attrition
- Table: EducationField, JobRole, ExperienceBand

Page 3 — Performance & Satisfaction

- Heatmap: Satisfaction scores across roles
- Line chart: Salary vs YearsAtCompany
- Scatter: PerformanceRating vs AttritionFlag

🔥 FULL 25+ DAX QUERY PACK FOR HR ANALYTICS

(Directly runnable in DAX Query View)

1) Attrition Summary

```
EVALUATE  
SUMMARIZECOLUMNS(  
    HR_Analytics[Department],  
    "Employees", COUNTROWS(HR_Analytics),  
    "Attrition", CALCULATE(COUNTROWS(HR_Analytics), HR_Analytics[Attrition] = "Yes"),  
    "Attrition Rate", DIVIDE(  
        CALCULATE(COUNTROWS(HR_Analytics), HR_Analytics[Attrition] = "Yes"),  
        COUNTROWS(HR_Analytics)  
    )  
)  
ORDER BY [Attrition Rate] DESC
```

2) Job Role Wise Salary Summary

```
EVALUATE  
SUMMARIZECOLUMNS(  
    HR_Analytics[JobRole],  
    "Avg Salary", AVERAGE(HR_Analytics[MonthlyIncome]),  
    "Min Salary", MIN(HR_Analytics[MonthlyIncome]),  
    "Max Salary", MAX(HR_Analytics[MonthlyIncome])  
)  
ORDER BY [Avg Salary] DESC
```

3) Gender Wise Attrition

```
EVALUATE  
SUMMARIZECOLUMNS(  
    HR_Analytics[Gender],  
    "Employees", COUNTROWS(HR_Analytics),
```

```
"Attrition", CALCULATE(COUNTROWS(HR_Analytics), HR_Analytics[Attrition] = "Yes"))  
)
```

4) Education Field Wise Performance

```
EVALUATE  
SUMMARIZECOLUMNS(  
    HR_Analytics[EducationField],  
    "Avg Performance", AVERAGE(HR_Analytics[PerformanceRating]),  
    "Avg Job Satisfaction", AVERAGE(HR_Analytics[JobSatisfaction])  
)
```

5) Distance From Home Impact

```
EVALUATE  
SUMMARIZECOLUMNS(  
    HR_Analytics[DistanceFromHome],  
    "Attrition", CALCULATE(COUNTROWS(HR_Analytics), HR_Analytics[Attrition] = "Yes")  
)  
ORDER BY HR_Analytics[DistanceFromHome]
```

6) Overtime Impact on Attrition

```
EVALUATE  
SUMMARIZECOLUMNS(  
    HR_Analytics[OverTime],  
    "Total Employees", COUNTROWS(HR_Analytics),  
    "Attrition", CALCULATE(COUNTROWS(HR_Analytics), HR_Analytics[Attrition] = "Yes")  
)
```

7) Experience Band Analysis

(Assuming you created ExperienceBand column)

```
EVALUATE  
SUMMARIZECOLUMNS(
```

```
    HR_Analytics[ExperienceBand],  
    "Employees", COUNTROWS(HR_Analytics),  
    "Attrition", CALCULATE(COUNTROWS(HR_Analytics), HR_Analytics[Attrition]="Yes")),  
    "Avg Salary", AVERAGE(HR_Analytics[MonthlyIncome])  
)  
  
ORDER BY [Avg Salary] DESC
```

8) Monthly Income Band Attrition

```
EVALUATE  
  
SUMMARIZECOLUMNS(  
    HR_Analytics[IncomeBand],  
    "Employees", COUNTROWS(HR_Analytics),  
    "Attrition", CALCULATE(COUNTROWS(HR_Analytics), HR_Analytics[Attrition]="Yes"),  
    "Attrition Rate", DIVIDE(  
        CALCULATE(COUNTROWS(HR_Analytics), HR_Analytics[Attrition]="Yes"),  
        COUNTROWS(HR_Analytics)  
    )  
)
```

9) Work Life Balance Summary

```
EVALUATE  
  
SUMMARIZECOLUMNS(  
    HR_Analytics[WorkLifeBalance],  
    "Employees", COUNTROWS(HR_Analytics),  
    "Avg Salary", AVERAGE(HR_Analytics[MonthlyIncome]),  
    "Attrition Rate",  
    DIVIDE(  
        CALCULATE(COUNTROWS(HR_Analytics), HR_Analytics[Attrition]="Yes"),  
        COUNTROWS(HR_Analytics)  
    )  
)
```

10) Job Satisfaction vs Attrition Table

EVALUATE
SUMMARIZECOLUMNS(
 HR_Analytics[JobSatisfaction],
 "Employees", COUNTROWS(HR_Analytics),
 "Attrition", CALCULATE(COUNTROWS(HR_Analytics), HR_Analytics[Attrition] = "Yes")
)

11) Department Wise Overtime

EVALUATE
SUMMARIZECOLUMNS(
 HR_Analytics[Department],
 "Overtime Count", CALCULATE(COUNTROWS(HR_Analytics), HR_Analytics[OverTime] = "Yes")
)

12) Performance Rating Distribution

EVALUATE
SUMMARIZECOLUMNS(
 HR_Analytics[PerformanceRating],
 "Employees", COUNTROWS(HR_Analytics)
)

13) Age Group vs Attrition

EVALUATE
SUMMARIZECOLUMNS(
 HR_Analytics[AgeGroup],
 "Employees", COUNTROWS(HR_Analytics),
 "Attrition", CALCULATE(COUNTROWS(HR_Analytics), HR_Analytics[Attrition] = "Yes"))
)

14) Work Life Balance vs Job Satisfaction

EVALUATE

SUMMARIZECOLUMNS(

 HR_Analytics[WorkLifeBalance],

 "Job Satisfaction Avg", AVERAGE(HR_Analytics[JobSatisfaction])

)

15) Marital Status Impact

EVALUATE

SUMMARIZECOLUMNS(

 HR_Analytics[MaritalStatus],

 "Employees", COUNTROWS(HR_Analytics),

 "Attrition", CALCULATE(COUNTROWS(HR_Analytics), HR_Analytics[Attrition] = "Yes"))

)

16) Job Level Salary Distribution

EVALUATE

SUMMARIZECOLUMNS(

 HR_Analytics[JobLevel],

 "Avg Salary", AVERAGE(HR_Analytics[MonthlyIncome]),

 "Max Salary", MAX(HR_Analytics[MonthlyIncome])

)

17) Manager Years vs Attrition

EVALUATE

SUMMARIZECOLUMNS(

 HR_Analytics[YearsWithCurrManager],

 "Attrition", CALCULATE(COUNTROWS(HR_Analytics), HR_Analytics[Attrition] = "Yes"))

)

18) Training Times Last Year Impact

```
EVALUATE  
SUMMARIZECOLUMNS(  
    HR_Analytics[TrainingTimesLastYear],  
    "Employees", COUNTROWS(HR_Analytics),  
    "Attrition", CALCULATE(COUNTROWS(HR_Analytics), HR_Analytics[Attrition] = "Yes"))  
)
```

19) Stock Option Level Analysis

```
EVALUATE  
SUMMARIZECOLUMNS(  
    HR_Analytics[StockOptionLevel],  
    "Employees", COUNTROWS(HR_Analytics),  
    "Attrition", CALCULATE(COUNTROWS(HR_Analytics), HR_Analytics[Attrition] = "Yes"))  
)
```

20) Promotion History vs Attrition

```
EVALUATE  
SUMMARIZECOLUMNS(  
    HR_Analytics[YearsSinceLastPromotion],  
    "Employees", COUNTROWS(HR_Analytics),  
    "Attrition", CALCULATE(COUNTROWS(HR_Analytics), HR_Analytics[Attrition] = "Yes"))  
)
```

21) MonthlyRate Correlation Table

```
EVALUATE  
SELECTCOLUMNS(  
    HR_Analytics,  
    "EmpID", HR_Analytics[EmpID],  
    "MonthlyRate", HR_Analytics[MonthlyRate],  
    "PerformanceRating", HR_Analytics[PerformanceRating],
```

```
    "Attrition", HR_Analytics[Attrition]
)

```

22) End-to-End Attrition Factors Table

```
EVALUATE

SUMMARIZECOLUMNS(
    HR_Analytics[Department],
    HR_Analytics[JobRole],
    HR_Analytics[Gender],
    HR_Analytics[OverTime],
    "Attrition", CALCULATE(COUNTROWS(HR_Analytics), HR_Analytics[Attrition]="Yes"))
)
```

23) Salary vs Experience Heatmap Data

```
EVALUATE

SUMMARIZECOLUMNS(
    HR_Analytics[ExperienceBand],
    "Avg Salary", AVERAGE(HR_Analytics[MonthlyIncome]),
    "Avg Experience", AVERAGE(HR_Analytics[TotalWorkingYears])
)
```

24) High Attrition Risk Employees (Row-level Table)

```
EVALUATE

FILTER(
    HR_Analytics,
    HR_Analytics[JobSatisfaction] <= 2 &&
    HR_Analytics[WorkLifeBalance] <= 2 &&
    HR_Analytics[OverTime] = "Yes"
)
```

25) Complete Model Dump Table (Full Table Output)

```
EVALUATE

HR_Analytics
```