

Employee Attrition Dashboard

✓ Data Gathering:

- ✓ In PBIDW goto "Get Data" and load the csv file named "HR_Analytics_Dataset.csv".
- ✓ It contains 1480 rows and 36 columns.
- ✓ Dataset Attribute Descriptions:

Column Name	Description
EmpID	Employee ID – Unique identifier for each employee. E.g., RM297 , RM302
Age	Employee's age in years. E.g., 18 , 19
Attrition	Indicates whether the employee has left (Yes) or is still with the company (No).
BusinessTravel	Frequency of travel required: Travel_Rarely , Travel_Frequently , Non-Travel
DailyRate	Daily earning or billing rate of the employee. E.g., 230 , 1306
Department	Department the employee works in: Sales , Research & Development , etc.
DistanceFromHome	Distance from employee's home to workplace (in kms or miles). E.g., 3 , 10 , 22
Education	Education level as numeric category: 1=Below College, 2=College, 3=Bachelor, 4=Master, 5=Doctor
EducationField	Specialization in education. E.g., Life Sciences , Medical , Marketing
EmployeeCount	Always 1 – used as a placeholder (can be dropped).
EmployeeNumber	System-generated unique number for employee. E.g., 405 , 614
EnvironmentSatisfaction	Satisfaction with work environment: 1 (Low) to 4 (Very High)
Gender	Employee gender: Male or Female
HourlyRate	Hourly rate of pay. E.g., 54 , 69 , 80
JobInvolvement	Level of involvement in job: 1 (Low) to 4 (Very High)
JobLevel	Job seniority level: 1 (Entry) to 5 (Executive)
JobRole	Designation or role: Sales Representative , Laboratory Technician , etc.
JobSatisfaction	Satisfaction with job: 1 (Low) to 4 (Very High)
MaritalStatus	Marital status: Single , Married , or Divorced
MonthlyIncome	Monthly base salary (net/gross). E.g., 1420 , 1569
MonthlyRate	Monthly rate billed to client or internal standard rate. (Earnings with incentives, bonus, or overtime included)
NumCompaniesWorked	Total number of previous companies worked at.

Column Name	Description
Over18	Indicates employee is over 18: Always Y (can be dropped).
Overtime	Does the employee work overtime: Yes or No
PercentSalaryHike	Recent percentage salary hike (increment).
PerformanceRating	Rating in most recent performance review: 1 (Low) to 4 (Excellent)
RelationshipSatisfaction	Satisfaction with colleagues: 1 (Low) to 4 (Very High)
StandardHours	Always 80 (default full-time hours in many orgs) – can be dropped
StockOptionLevel	Stock options given: 0 (None) to 3 (High)
TotalWorkingYears	Total years of work experience
TrainingTimesLastYear	Number of training programs attended last year
WorkLifeBalance	Rating of balance between work and personal life: 1 (Bad) to 4 (Excellent)
YearsAtCompany	Total years worked in this company
YearsInCurrentRole	Years spent in current job role
YearsSinceLastPromotion	Years since the employee was last promoted
YearsWithCurrManager	Years working with the current manager

✓ Data Cleaning:

- In PQEW, under View tab enable "Column quality". Check null values in all the columns and delete the column "YearsWithCurrManager" as it is containing 4% null values and also not required column. (Optional)
- Do the Group by on "EmplID" with row count to check for duplicate rows. And found 10 duplicate rows on "EmplID". Delete this step.
- In the main query table select all the columns and go for "Remove Duplicates". Now after remove duplicates 1480 rows will be reduced to 1473 rows.
- Check for misspelled entries. Under column "BusinessTravel" there we shall replace "TravelRarely" with "Travel_Rarely".
- Select all columns and goto "Transform" and "Detect Data Type" to assign right datatypes to all the columns. Now click "Close & Apply" and return to PBIDW.
- In PBIDW insert following columns:
 -  Insert column **AttritionFlag** against formula **AttritionFlag =**
IF(HR_Analytics_Dataset[Attrition] = "Yes", 1, 0)
 -  Insert column **SalarySlab** against formula **SalarySlab =**
**if(HR_Analytics_Dataset[MonthlyIncome] <= 5000, "Upto 5K",
if(HR_Analytics_Dataset[MonthlyIncome] <= 10000, "5K+ to 10K",
if(HR_Analytics_Dataset[MonthlyIncome] <= 15000, "10K+ to 15K", "15K+")))**
 -  Insert column **AgeGroup** against formula **AgeGroup = if(HR_Analytics_Dataset[Age] <= 25, "18-25", if(HR_Analytics_Dataset[Age] <= 35, "26-35", if(HR_Analytics_Dataset[Age] <= 45, "36-45", if(HR_Analytics_Dataset[Age] <= 55, "46-55", "55+"))))**

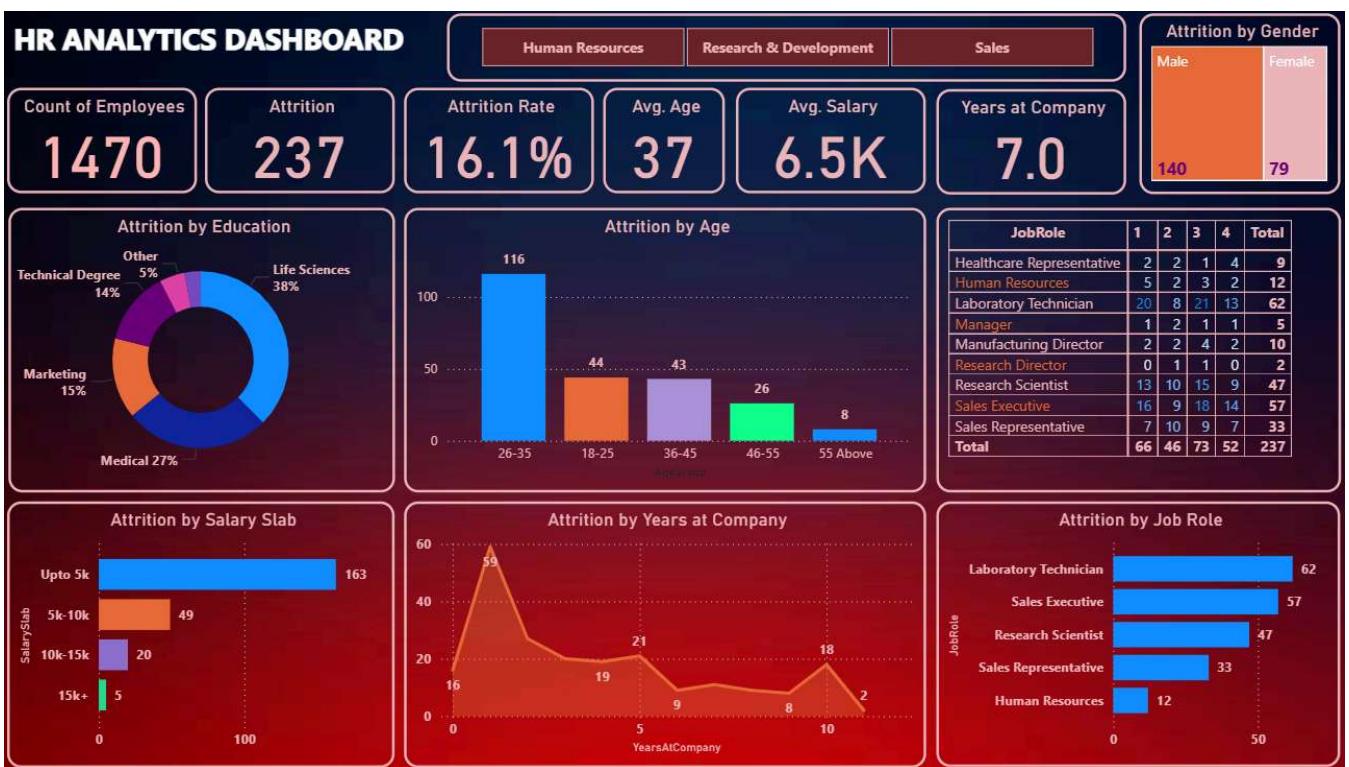
- Create a measure variable **AttritionRate** against this DAX formula **AttritionRate = DIVIDE(SUM(HR_Analytics_Dataset[AttritionFlag])), COUNT(HR_Analytics_Dataset[EmpID]))**. Make it of % type and with one decimal digit.
 - Otherwise we can create the same measure variable **AttritionRate** against the DAX formula **AttritionRate = DIVIDE(CALCULATE(COUNT(HR_Analytics_Dataset[EmpID]), HR_Analytics_Dataset[Attrition] = "Yes"), COUNT(HR_Analytics_Dataset[EmpID]))**. Make it of % type and with one decimal digit.
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Dashboard Preparation Steps:

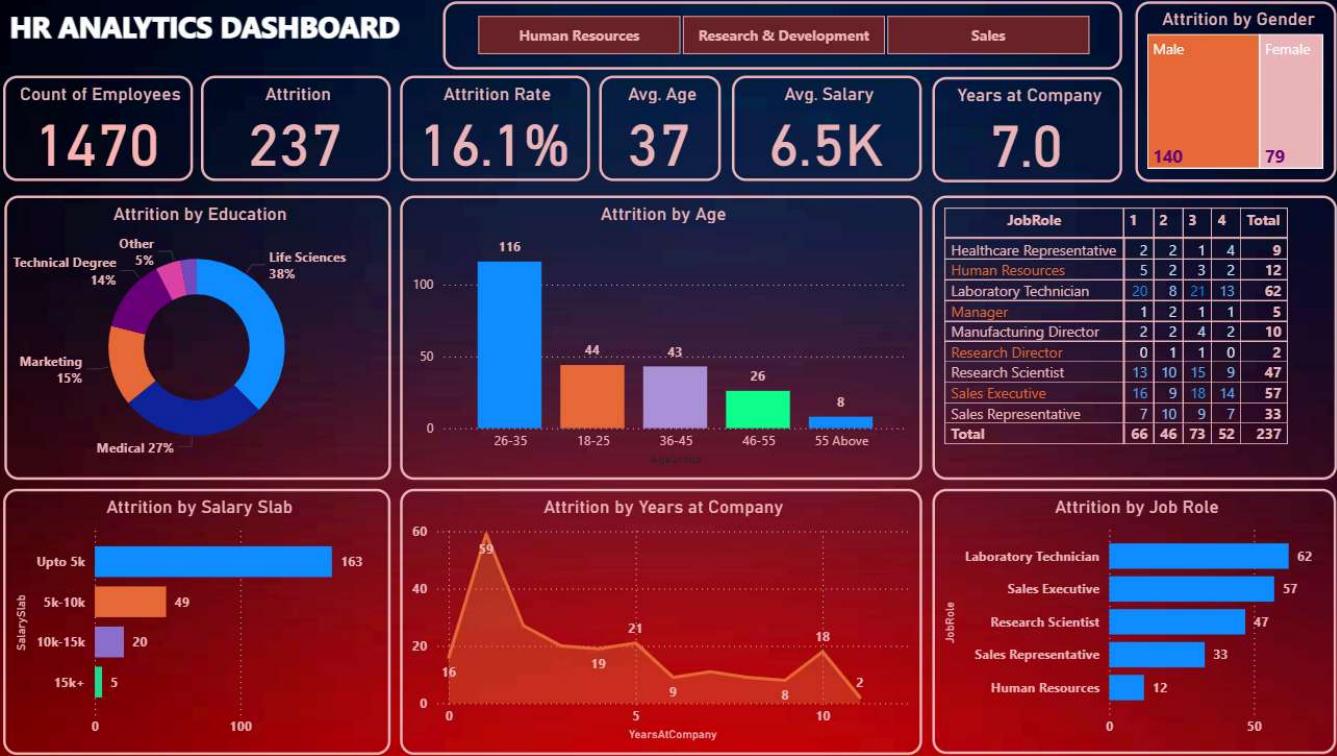
- Load canvas background image "HR_Dashboard_Background.jpg" with **Image fit: Fit**
- For color code refer: <https://colorhunt.co/>



- Color code used here: **FFB4B4** and **E66C37**



- Insert **Text Box** with **Text: HR ANALYTICS DASHBOARD, Font: Segoe (Bold), Font size: 20, Bold: Enabled, Background: No, Color: White, Height: 56, Width: 406**
- 1. Insert **Card with Fields:** Count (Distinct) of EmpID, **Callout value (Color): FFB4B4, Category label: No, Height: 97, Width: 175, Title: Count of Employees, Text Color: FFB4B4, Visual Border Color: FFB4B4, Rounded corners: 13 px, Width: 3 px**
- 2. Insert **Card with Fields:** Sum of AttritionFlag, **Title: Attrition**
- 3. Insert **Card with Fields:** AttritionRate, **Title: Attrition Rate**
- 4. Insert **Card with Fields:** Average of Age, **Title: Avg. Age, Value decimal places: 0**
- 5. Insert **Card with Fields:** Average of MonthlyIncome, **Title: Avg. Salary, Value decimal places: 1**
- 6. Insert **Card with Fields:** Average of YearsAtCompany, **Title: Years at Company, Value decimal places: 1**



- ✓ Insert **Donut chart** with **Legend**: EducationField, **Value**: Sum of AttritionFlag, **Detail labels Values**: <Category, percentage of total>, **Bold**, FFB4B4, **0**, **Height**: 263, **Width**: 354, **Title**: Attrition by Education, **Text Color**: FFB4B4, Center aligned, **Visual Border Color**: FFB4B4, **Rounded corners**: 13 px, **Width**: 3 px
- ✓ Insert **Stacked column chart** with **X-axis**: AgeGroup, **Y-axis**: Sum of AttritionFlag, **X-axis & Y-axis**: **Bold**, FFB4B4, **Height**: 263, **Width**: 533, **Title**: Attrition by Age, **Text Color**: FFB4B4, Center aligned, **Visual Border Color**: FFB4B4, **Rounded corners**: 13 px, **Width**: 3 px



- ✓ Insert **Clustered bar chart** with **Y-axis**: SalarySlab, **X-axis**: Sum of AttritionFlag, **X-axis & Y-axis**: **Bold**, FFB4B4, **Height**: 263, **Width**: 533, **Title**: Attrition by Salary Slab, **Text Color**: FFB4B4, Center aligned, **Visual Border Color**: FFB4B4, **Rounded corners**: 13 px, **Width**: 3 px

- Insert **Area chart** with **X-axis**: YearAtCompany, **Y-axis**: Sum of AttritionFlag, **X-axis & Y-axis**: Bold, FFB4B4, **Lines color**: E66C37, **Height**: 284, **Width**: 532, **Title**: Attrition by Years at Company, **Text Color**: FFB4B4, Center aligned, **Visual Border Color**: FFB4B4, **Rounded corners**: 13 px, **Width**: 3 px, **Filters on this visual**: is less than 12



- Insert **Clustered bar chart** with **Y-axis**: JobRole, **X-axis**: Sum of AttritionFlag, **X-axis & Y-axis**: Bold, FFB4B4, Adjust Y-axis width to 37%, **Height**: 284, **Width**: 362, **Title**: Attrition by Job Role, **Text Color**: FFB4B4, Center aligned, **Visual Border Color**: FFB4B4, **Rounded corners**: 13 px, **Width**: 3 px, **Filters on this visual**: JobRole, Top 5, By value Sum of AttritionFlag
- Insert **Matrix** with **Rows**: JobRole, **Columns**: JobSatisfaction, **Values**: Sum of AttritionFlag, **Values Text color and Alternate Text Color**: Bold, FFB4B4 and E66C37, **Height**: 259, **Width**: 362, **Visual Border Color**: FFB4B4, **Rounded corners**: 13 px, **Width**: 3 px



- Insert **Treemap** with **Category**: Gender, **Values**: Sum of AttritionFlag, **Colors**: FFB4B4 and E66C37, **Height**: 142, **Width**: 185, **Title**: Attrition by Gender, **Visual Border Color**: FFB4B4, **Rounded corners**: 13 px, **Width**: 3 px
- Insert **Slicer** with **Field**: Department, **Colors**: FFB4B4 and 6B2328, **Height**: 56, **Width**: 692, **Visual Border Color**: FFB4B4, **Rounded corners**: 13 px, **Width**: 3 px



In []: