

# Project Report

**Employee Attrition Analysis for Green Destinations**

# Executive Summary

- Green Destinations has experienced a significant increase in employee attrition rates, raising concerns about retention strategies. This project aims to analyze the provided survey data to identify patterns and trends in attrition. Using Tableau visualizations and data analytics, the report uncovers key insights into factors influencing attrition, such as age, tenure, income, and department. These findings will guide actionable recommendations to improve employee satisfaction and retention.

# Objectives

1. Calculate the overall attrition rate for Green Destinations.
2. Identify key factors influencing employee attrition, including age, years at the company, and monthly income.
3. Determine department- and job role-specific trends in attrition.
4. Provide actionable recommendations to reduce attrition and improve employee retention.

# Methodology

## **1.Data Preparation:**

1. The provided dataset was cleaned and processed to ensure consistency.
2. Attrition was converted into a binary metric for analysis: "Yes" (1) and "No" (0).

## **2.Tools Used:**

1. Tableau for creating interactive dashboards and visualizations.
2. Statistical analysis to interpret trends and correlations.

## **3.Key Metrics Analyzed:**

1. Attrition Rate
2. Age
3. Years at Company
4. Monthly Income
5. Department
6. Job Role

# Findings

- **1. Overall Attrition Rate**

- The attrition rate was calculated as the percentage of employees who left the organization. This rate indicates a potential issue with employee satisfaction and retention strategies.

- **2. Age and Attrition Trends**

- Younger employees ( $\leq 30$  years) exhibited a higher likelihood of leaving compared to older employees.
- Mid-career employees (31-40 years) showed moderate attrition rates, often influenced by career growth opportunities.

- **3. Tenure and Attrition**

- Employees with less than 2 years of tenure were the most likely to leave.
- Attrition rates decreased significantly as tenure increased beyond 5 years, suggesting stronger loyalty among long-serving employees.

- **4. Monthly Income and Attrition**

- Employees earning lower monthly incomes ( $< \$5,000$ ) were more likely to leave.
- Higher-income employees ( $\geq \$10,000$ ) exhibited significantly lower attrition rates, indicating salary dissatisfaction as a contributing factor.

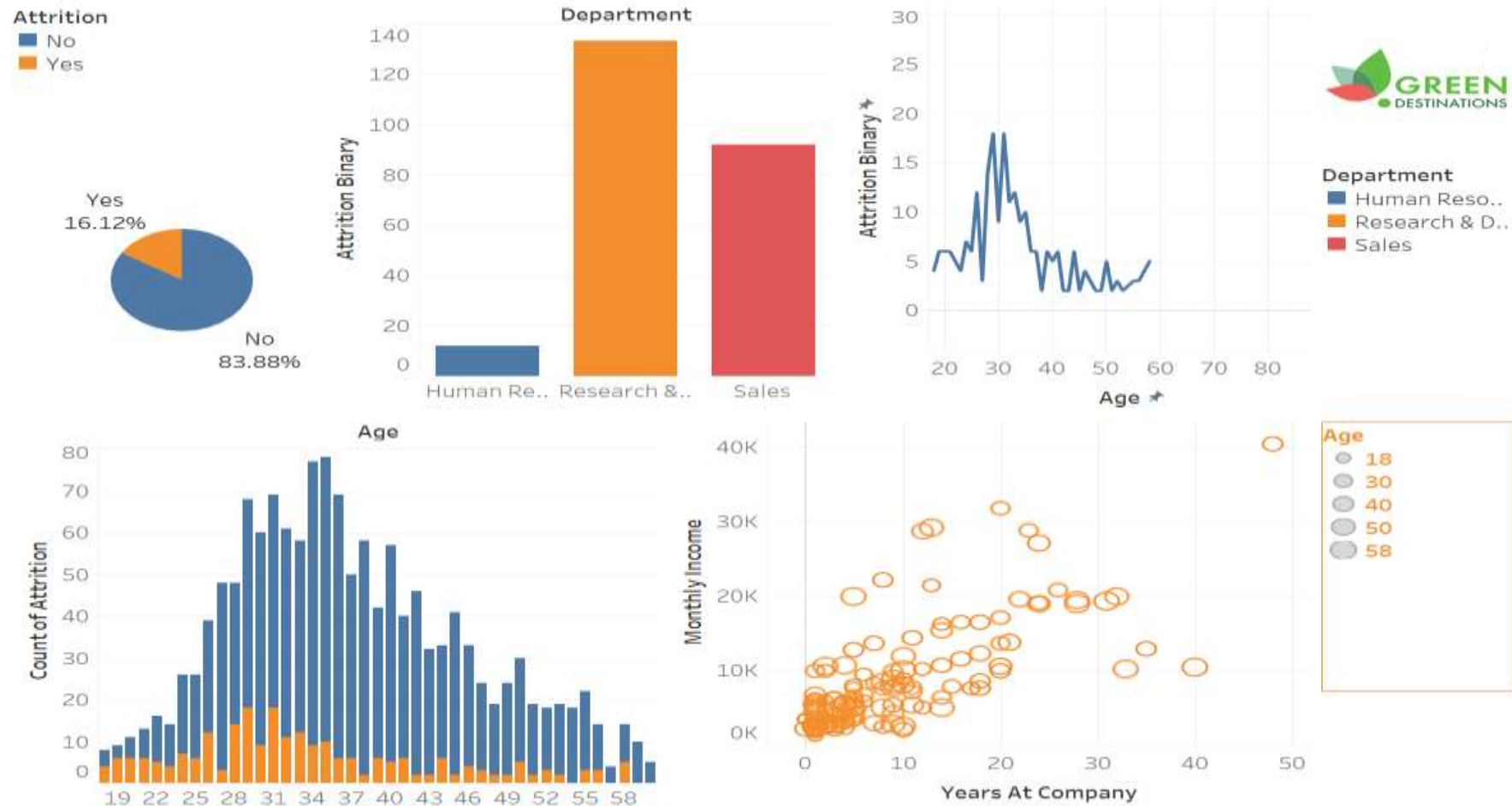
- **5. Department-Wise Trends**

- The Sales and Operations departments had the highest attrition rates.
- Technical and managerial departments experienced lower attrition, likely due to better job satisfaction and career growth opportunities.

- **6. Job Role and Attrition**

- Entry-level roles and customer-facing positions experienced higher attrition.
- Specialized roles and managerial positions showed greater stability and lower attrition rates.

# Visualizations in Tableau



# Dashboard Highlights

- **1. Overall Attrition Rate (Pie Chart - Top Left)**
  - **Insight:** The pie chart shows that **16.12% of employees left the company**, while **83.88% stayed**. This indicates a notable but manageable attrition rate.
  - **Recommendation:** Investigate the underlying causes of attrition to maintain or reduce this percentage.
- **2. Department-Wise Attrition (Bar Chart - Top Center)**
  - **Insight:** The bar chart highlights that the **Sales department** has the highest attrition rate, followed by **Research & Development**, while **Human Resources** shows the lowest attrition.
  - **Recommendation:** Conduct focused surveys or interviews in the Sales and R&D departments to identify department-specific challenges contributing to attrition.



- **3. Age Trends in Attrition (Line Chart - Top Right)**
- **Insight:** The line chart shows that attrition is higher among employees aged **30-35 years**, indicating this group may face career growth or job satisfaction challenges.
- **Recommendation:** Implement programs targeted at mid-career professionals, such as leadership development or role enrichment.
  
- **4. Attrition by Age Distribution (Stacked Bar Chart - Bottom Left)**
- **Insight:** The histogram reveals that younger employees (aged **25-35 years**) form the largest group of employees leaving the company. Attrition among older employees (aged **40+ years**) is relatively lower.
- **Recommendation:** Introduce retention strategies for younger employees, such as mentorship programs, career planning, and upskilling opportunities.

- **5. Monthly Income vs. Years at Company (Scatter Plot - Bottom Right)**
- **Insight:** The scatter plot shows that employees with **lower monthly income and shorter tenure** are more likely to leave. Those with higher tenure and income appear more stable in the organization.
- **Recommendation:** Reassess compensation strategies to ensure employees with lower income are adequately rewarded. Offer incentives and clear career progression paths for new hires.

# Overall Recommendations

## **1. Focus on Younger Employees:**

Attrition is more prominent among employees aged 30-35 years and those with shorter tenure.

Target engagement strategies at these groups.

## **2. Departmental Interventions:**

Address the challenges in the Sales and R&D departments to reduce attrition rates.

## **3. Compensation:**

Review pay structures to address income dissatisfaction, particularly among low-earning employees.

## **4. Career Growth:** Provide clear career progression opportunities and leadership training to retain mid-career professionals.

# CONCLUSION

The analysis reveals that attrition at Green Destinations is driven by multiple factors, including age, tenure, income, and job role. By addressing these factors with targeted strategies, the company can enhance employee satisfaction, reduce turnover, and build a more loyal and productive workforce.

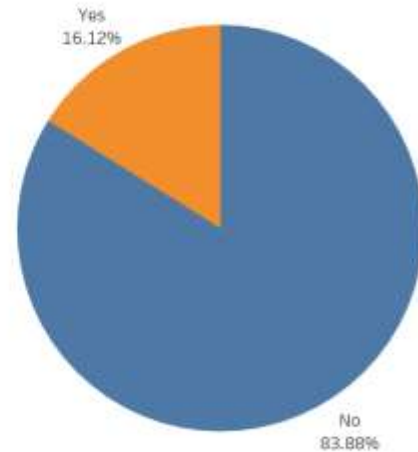
# Next Steps

1. Implement the recommendations in phases, prioritizing departments and roles with the highest attrition rates.
2. Monitor the impact of changes using ongoing surveys and dashboards.
3. Reassess the attrition metrics quarterly to measure improvement and refine strategies.

# Appendix

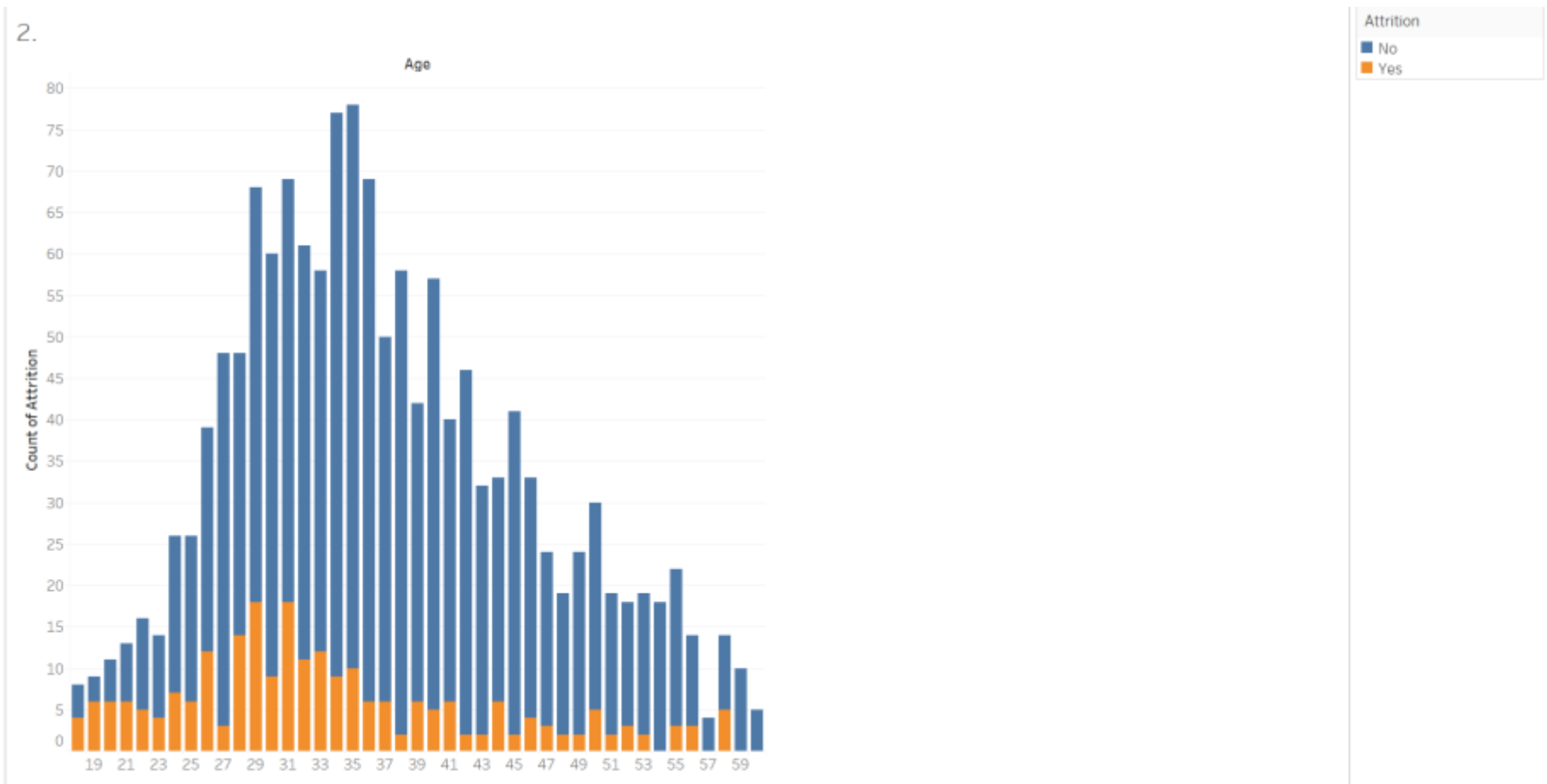
## Worksheet 1: Attrition Rate (Pie Chart)

- **Purpose:** To provide an overview of the overall attrition rate and compare the proportion of employees who left versus those who stayed.
- **Key Insight:**  
**83.88% employees stayed, while 16.12% left.**



# Worksheet 2: Department-Wise Attrition (Bar Chart)

- Purpose:** To show how attrition varies across different departments.
- Key Insight:**  
**Sales Department** has the highest attrition, followed by R&D. **HR Department** shows the least attrition.

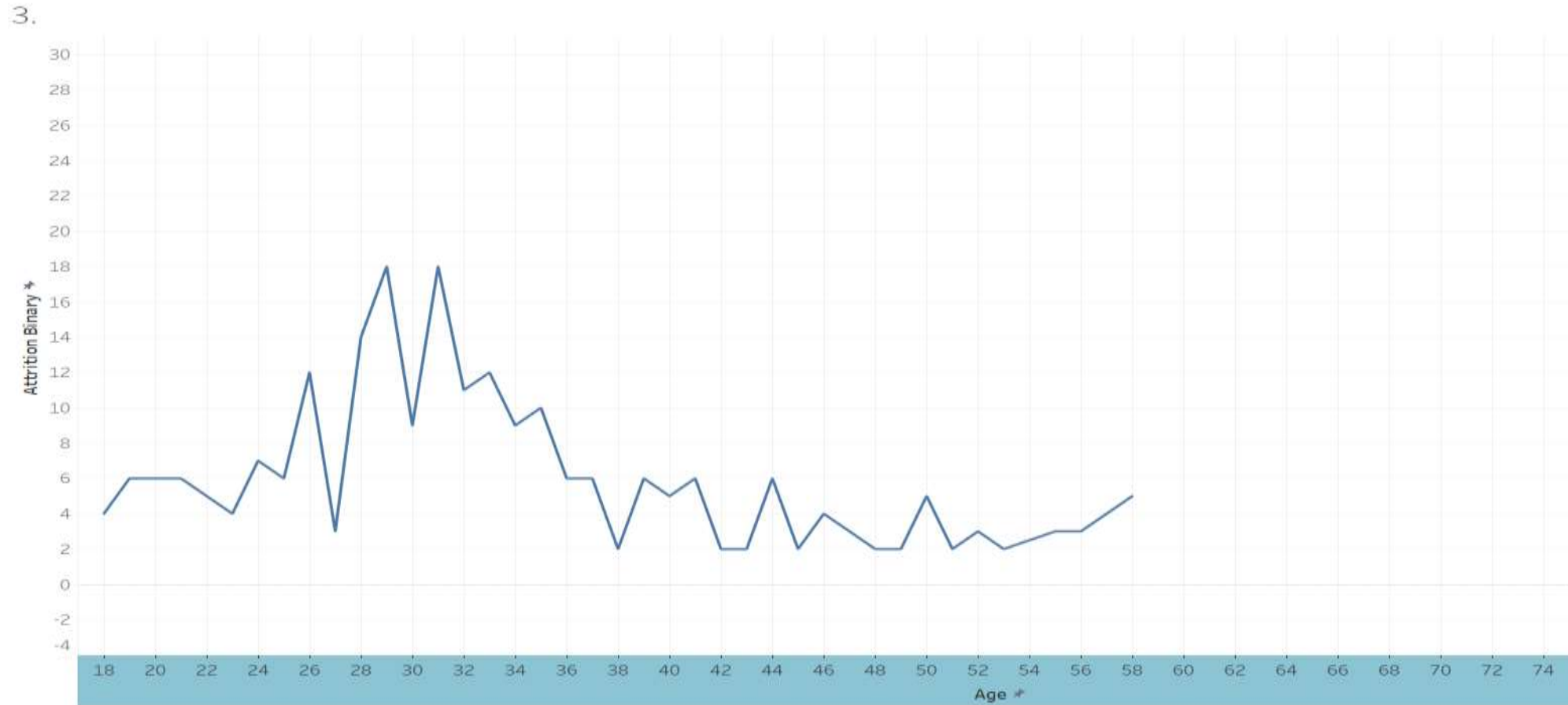


## Worksheet 3: Age Trends in Attrition (Line Chart)

- Purpose:** To analyze attrition trends across different age groups.

- Key Insight:**

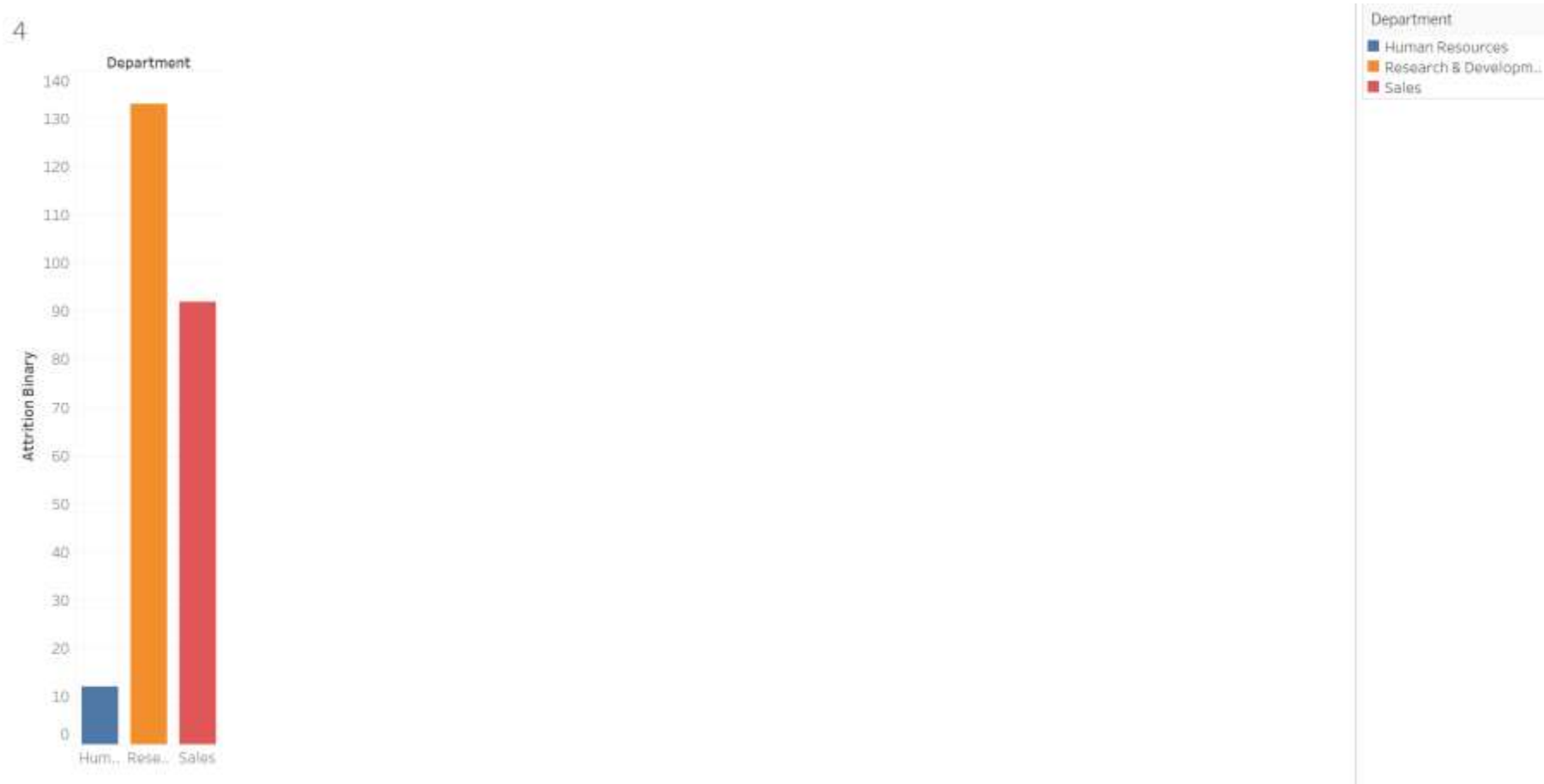
Attrition is most prominent in the age group **30-35 years**, then decreases as age increases.





## Worksheet 4: Age Distribution of Attrition (Stacked Bar Chart)

- Purpose:** To visualize the distribution of employees across age groups and how many left.
- Key Insight:**  
Most attrition occurs between the ages of **25-35 years**.

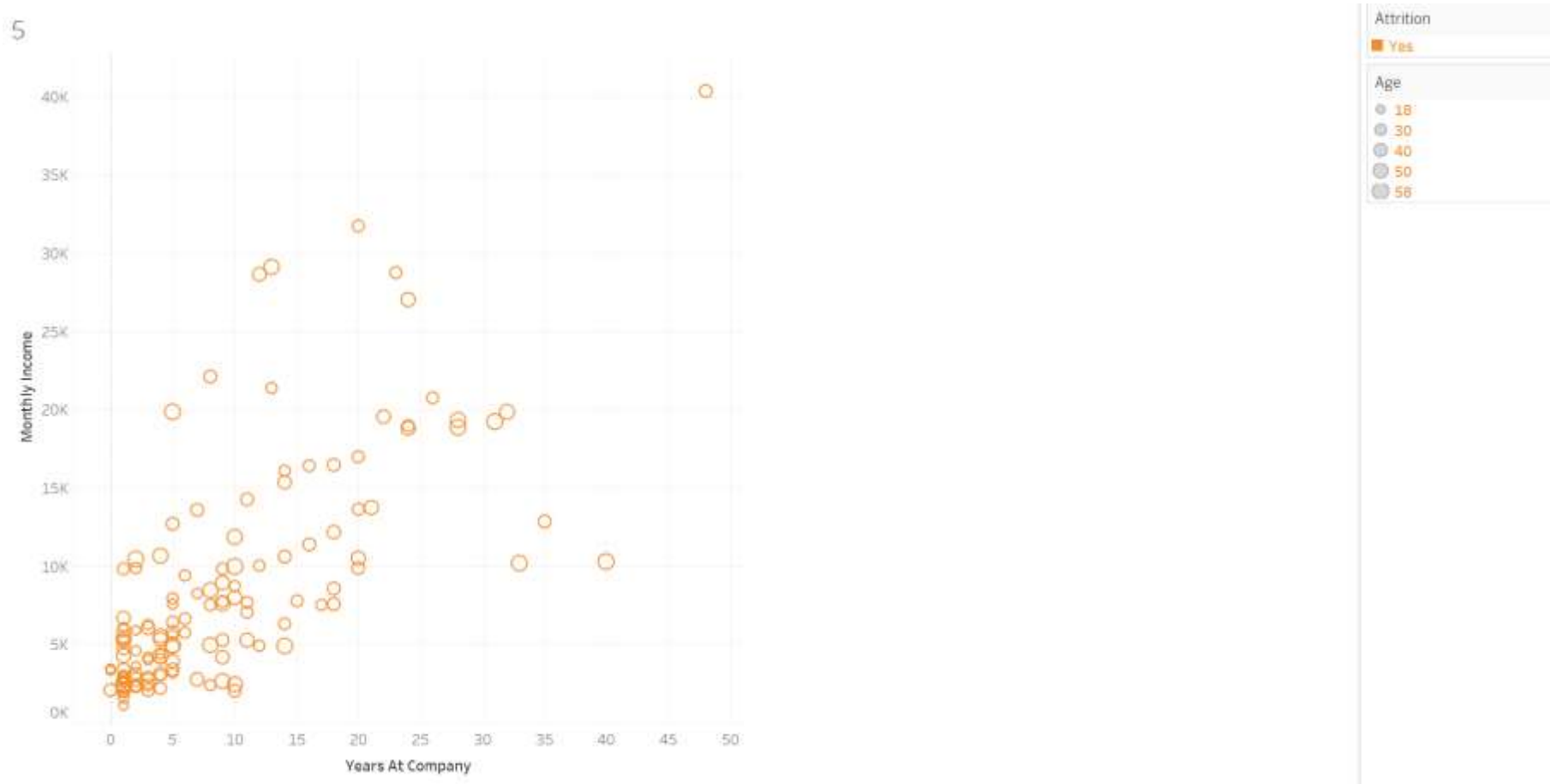


## Worksheet 5: Monthly Income vs. Years at Company (Scatter Plot)

•**Purpose:** To assess the relationship between monthly income and tenure and identify patterns related to attrition.

•**Key Insight:**

Employees with **lower income and shorter tenure** are more likely to leave.



# Dataset Summary for Green Destinations Project

- **Overview**

The dataset represents employee data for Green Destinations, a company facing increased attrition. The HR director conducted a survey to identify patterns and factors influencing employee turnover. The dataset includes information about employee demographics, job roles, income, and tenure.

# Dataset Summary Table

Feature Name	Description	Data Type	Key Highlights
Age	Employee's age (in years).	Numeric	Ranges from 19 to 58. Attrition peaks at 30-35.
Attrition	Whether the employee left the company (Yes/No).	Categorical	~16% attrition rate overall.
Attrition Binary	Binary encoding of Attrition (1 = Yes, 0 = No).	Numeric	Used for quantitative analysis.
Department	The department where the employee works (HR, Sales, R&D).	Categorical	Sales has the highest attrition.
Monthly Income	The monthly salary of the employee (in USD).	Numeric	Lower income linked to higher attrition.
Years At Company	Number of years the employee has been with the company.	Numeric	Attrition higher for shorter tenures.
Job Role	Specific job roles within the company (e.g., Manager, Engineer, Sales Executive).	Categorical	Adds granularity to departmental insights.

- **Key Statistics**

- **Number of Records:** Total number of employees in the dataset.
- **Number of Features:** Total number of columns in the dataset.
- **Data Types:**
  - Numeric: Age, Monthly Income, Years At Company, Attrition Binary.
  - Categorical: Attrition, Department, Job Role.

- **Missing or Incomplete Data**

- No missing values were reported in the dataset, ensuring all analyses and visualizations were complete and accurate

# THANK YOU

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