Title: "Employee Attrition Analysis for Green Destinations"

"An analysis to uncover trends and factors influencing employee turnover"

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Internship Batch: 15-11-24 to 15-12-24

- **Main Objective:** "To analyze employee attrition at Green Destinations and identify factors influencing turnover such as age, years at the company, and income."

key objectives:

- Calculate the attrition rate.

- Analyze trends by age, income, and tenure.

- Provide actionable insights to reduce attrition.

Given Resources:

- **Dataset name:** "greendestination.csv"
- **Data source:** HR Director from GreenDestinations.

Key features:

- **key columns:** "attrition," "age," "monthlyincome," "yearsatcompany," etc."
- **data cleaning:** Missing values handled(no null values), Changed the column names to ease the working Process.

	A	B	C	D	E	F	G	H	I	J	K	L	M
1	age	attrition	monthlyincome	yearsatcompany	gender	employeecount	employeenumber	businesstravel	dailyrate	department	distancefromhome	education	educationfield
2	41	Yes	5993	6	Female	1	1	Travel_Rarely	1102	Sales	1	2	Life Sciences
3	49	No	5130	10	Male	1	2	Travel_Frequently	279	Research & Development	8	1	Life Sciences
4	37	Yes	2090	0	Male	1	4	Travel_Rarely	1373	Research & Development	2	2	Other
5	33	No	2909	8	Female	1	5	Travel_Frequently	1392	Research & Development	3	4	Life Sciences
6	27	No	3468	2	Male	1	7	Travel_Rarely	591	Research & Development	2	1	Medical
7	32	No	3068	7	Male	1	8	Travel_Frequently	1005	Research & Development	2	2	Life Sciences
8	59	No	2670	1	Female	1	10	Travel_Rarely	1324	Research & Development	3	3	Medical
9	30	No	2693	1	Male	1	11	Travel_Rarely	1358	Research & Development	24	1	Life Sciences
10	38	No	9526	9	Male	1	12	Travel_Frequently	216	Research & Development	23	3	Life Sciences
11	36	No	5237	7	Male	1	13	Travel_Rarely	1299	Research & Development	27	3	Medical

Step-by-step process:

- **Tools/Software:** Tableau for visualization and Python for preprocessing.

- **Data Cleaning :** Removed null_values, Changed column names to ease the analysis (e.g. Changing upper case words into lower case, Removing <space> and putting '_ ') in python. Attrition rate can be analysed in both Python and Tableau.

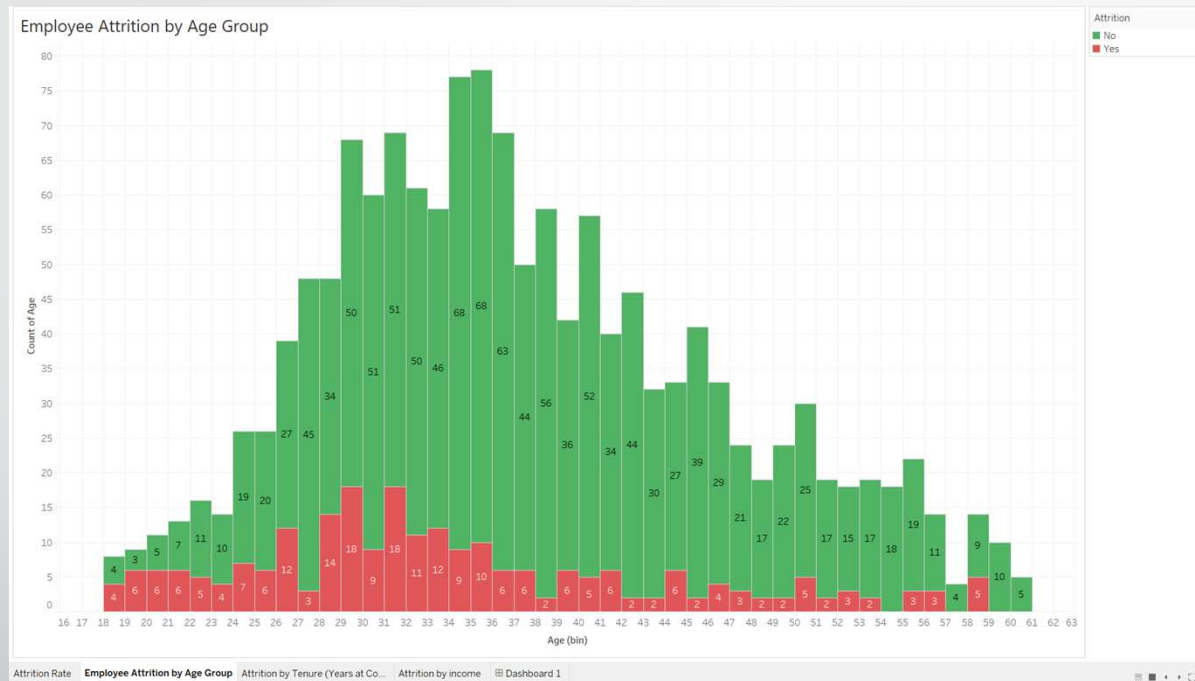- **Visualizations created:** Pie chart, Bar chart, Histogram, Scatter plot.

Attrition Rate Analysis
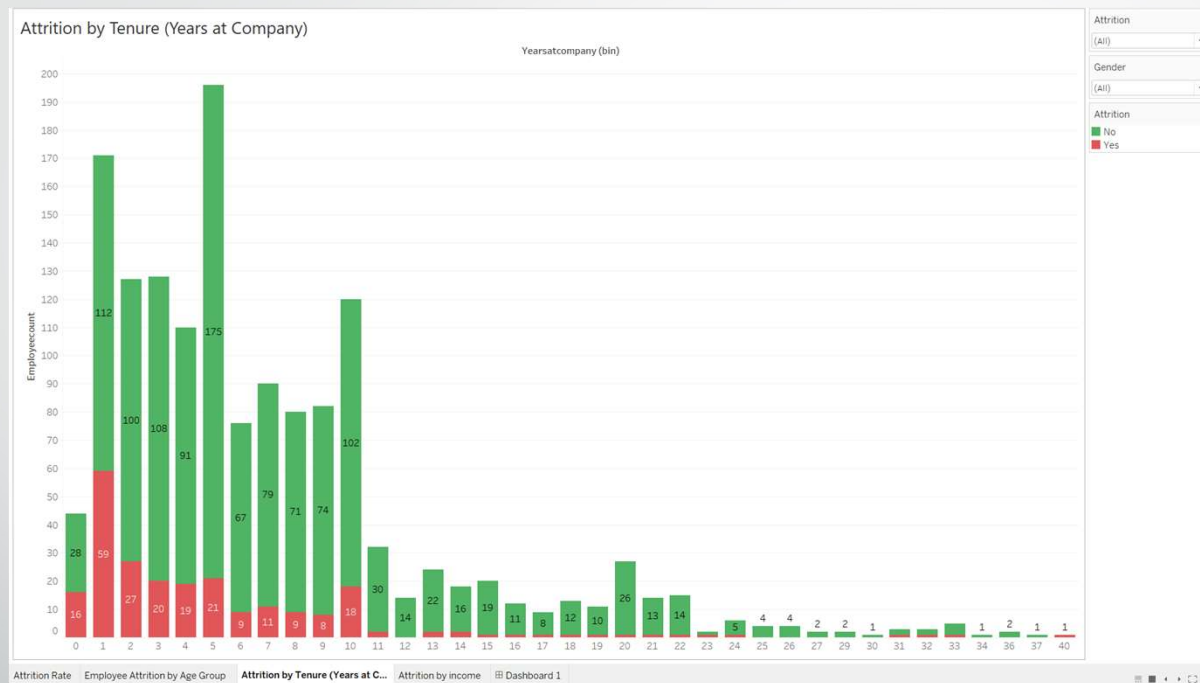

Attrition:Yes
16.12%
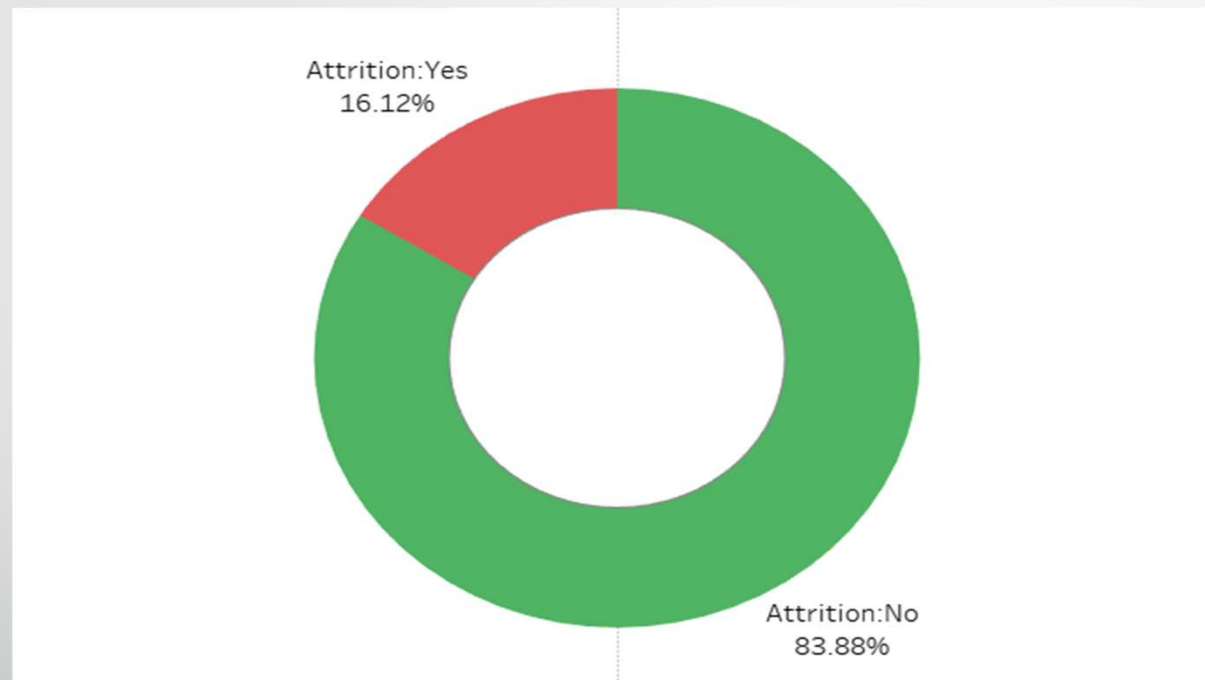
Attrition:No
83.88%

- 16% of Employees have left the company, highlighting the need for retention strategies

Age vs. Attrition Analysis

- Younger employees (under 30) show a higher attrition rate, suggesting dissatisfaction in early career roles
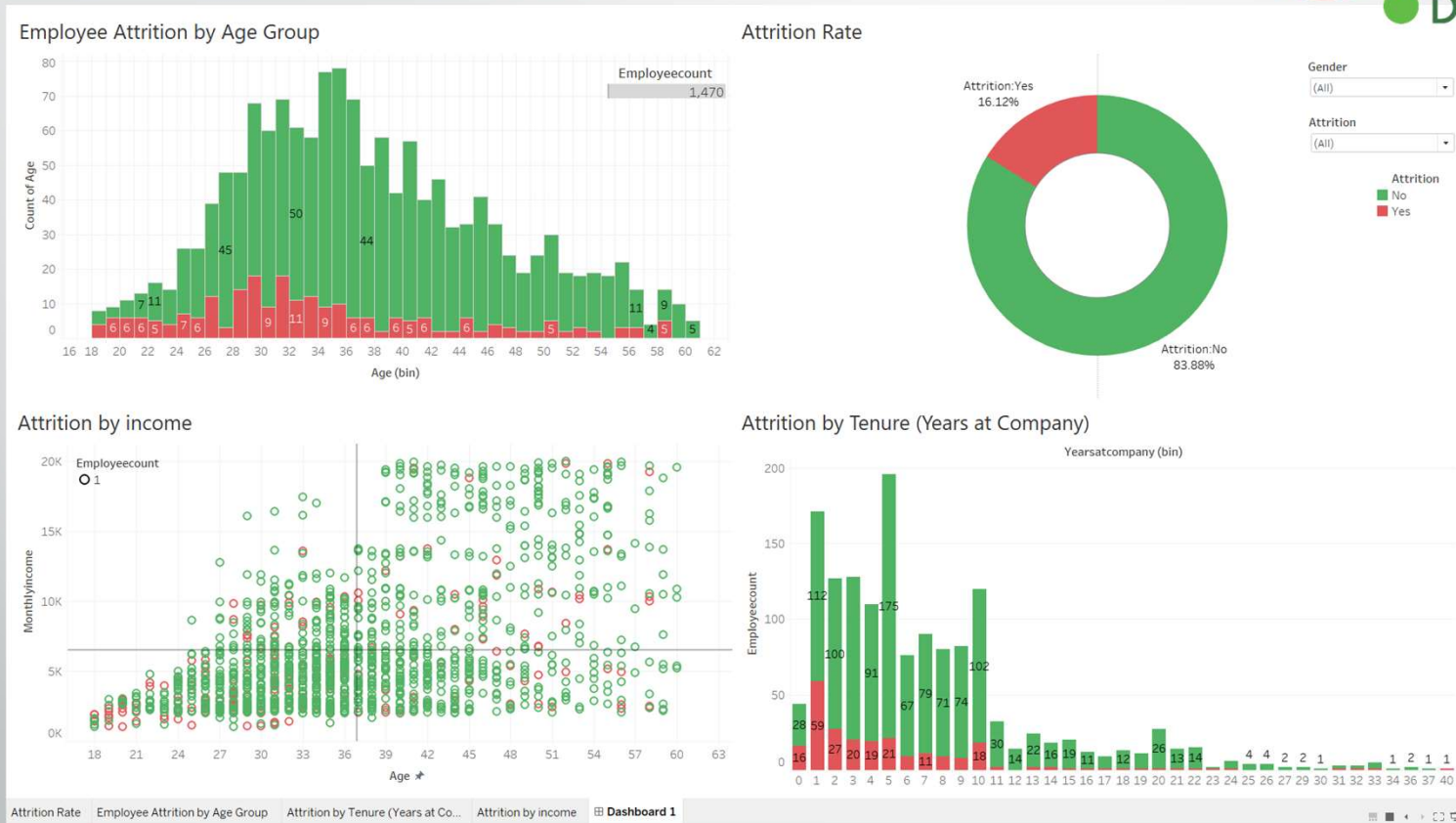
Tenure vs. Attrition Analysis

- Employees with less than 2 years of service are more likely to leave.

Income vs. Attrition Analysis

- Lower income levels correlate with higher attrition rates, indicating dissatisfaction with compensation

Visual Insights and Dashboard Overview.

- https://public.tableau.com/views/greendestinationProject/Dashboard1?:language=en-GB&:sid=&:redirect=auth&:display_count=n&:origin=viz_share_link

vr1   venu reddy, 20-12-2024

Recommendations to Reduce Attrition

- **Enhance Employee Engagement:** Implement programs to support younger employees (e.g., mentorship, career growth plans).

- **Improve Onboarding Processes:** Focus on creating a supportive environment for employees in their first 2 years.

- **Reevaluate Compensation:** Adjust salaries for low-income employees to align with industry standards.

- **Provide Recognition and Rewards:** Regularly reward high performers to boost morale and retention.

- **Conduct Regular Surveys:** Gather feedback from employees to identify concerns and address them proactively.

These actionable points focus on addressing the root causes of attrition.

Challenges Faced During Analysis

- **Data Quality Issues:** Checking the null values and changing the names of the columns with the appropriate python code was difficult at the start.

- **Complex Relationships:** Understanding the interaction between factors like income, age, and tenure was challenging.

- **Visualization Choices:** Selecting the most appropriate charts to convey insights took careful consideration.

- **Tool Familiarity:** Learning Tableau features while maintaining efficiency in analysis was a bit of task.

Conclusion:

Summary of Findings:

- The analysis revealed a 16.12% attrition rate, with higher attrition among employees aged 28–36 and during the early years of tenure.

- Income levels also play a significant role in influencing attrition.

By addressing these factors, Green Destinations can build a more stable and satisfied workforce.

Thank You!

GREEN
DESTINATIONS

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