

HR Attrition Analysis Report

By: Darlyne Salome

Date: Tuesday 17th June , 2025

Table of content

Project Goal.....	3
Dataset Overview	3
Visual Analysis & Insights.....	3
Summary of Findings	6
HR Recommendations.....	6
Tools Used.....	7

Project Goal

The objective of this project is to use data analytics to uncover the key drivers of employee attrition and propose actionable human resource (HR) strategies that can improve employee retention. By analyzing historical employee data, we aim to identify patterns and risk factors associated with turnover.

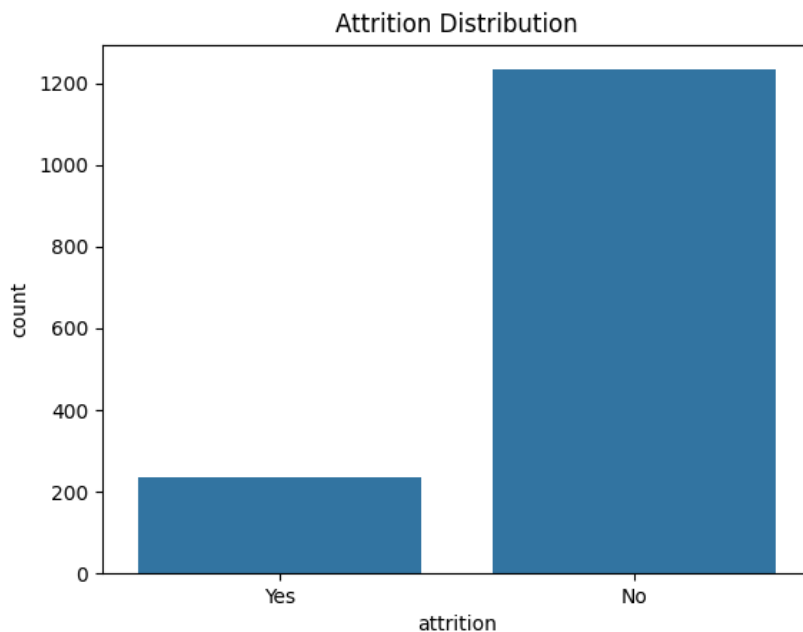
Dataset Overview

The dataset used in this analysis was sourced from Kaggle and contains HR records for 1,470 employees. It includes 35 features such as age, gender, department, job role, salary, job satisfaction, and whether an employee left the company (attrition). The dataset represents a mix of technical and non-technical roles across various departments and levels of experience

Visual Analysis & Insights

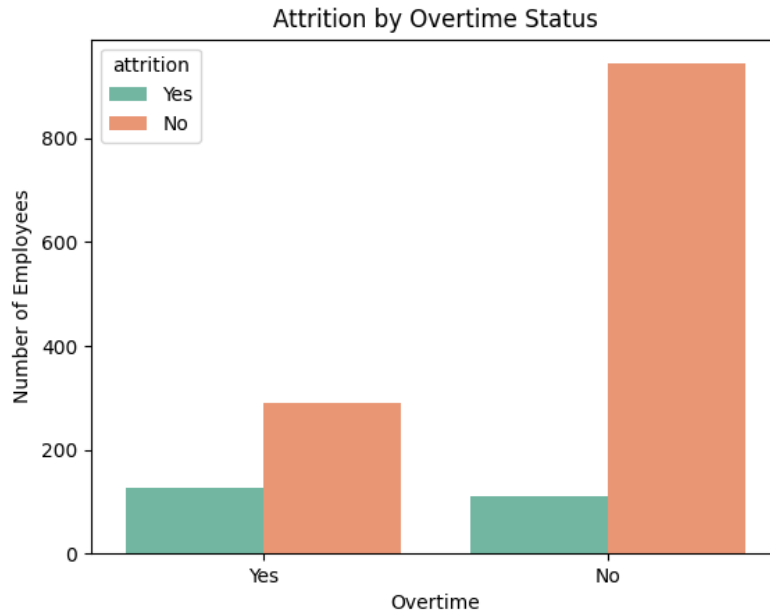
1. Overall Attrition Distribution

Insight: Out of 1470 employees, 237 left the company (~16.1%).



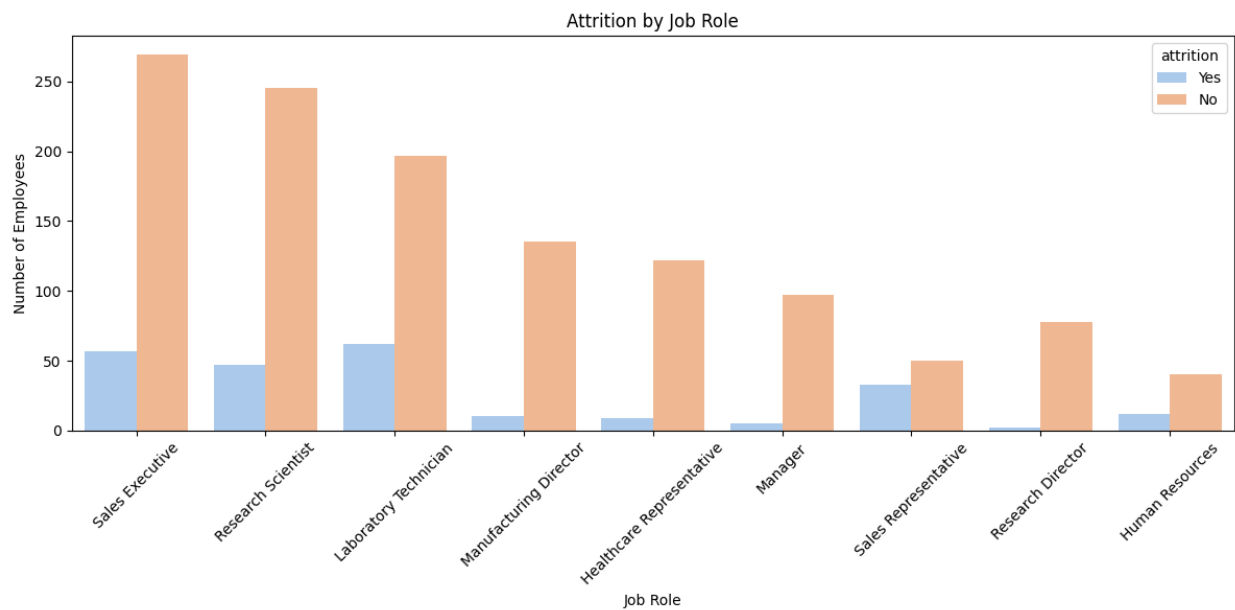
2. Overtime vs Attrition

Insight: Employees who work overtime are more than twice as likely to leave.



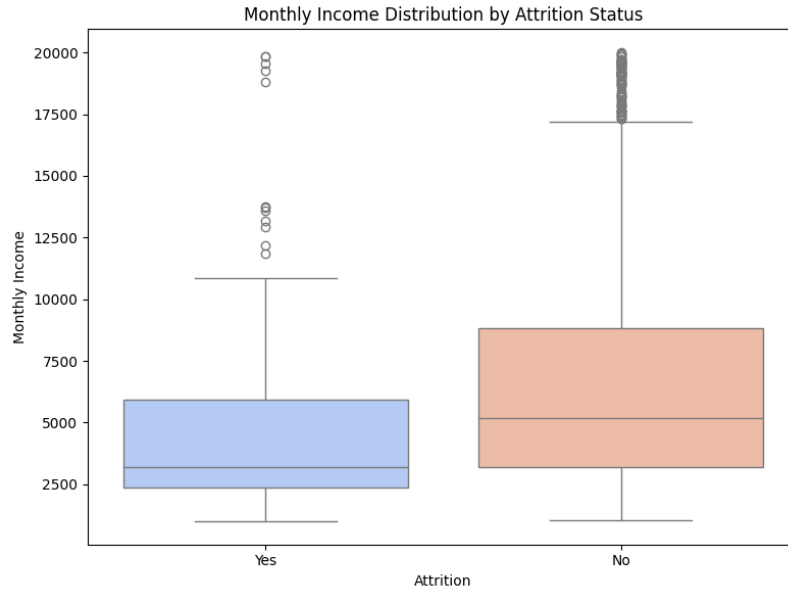
3. Job Role vs Attrition

Insight: Sales Reps and Research roles have the highest attrition.



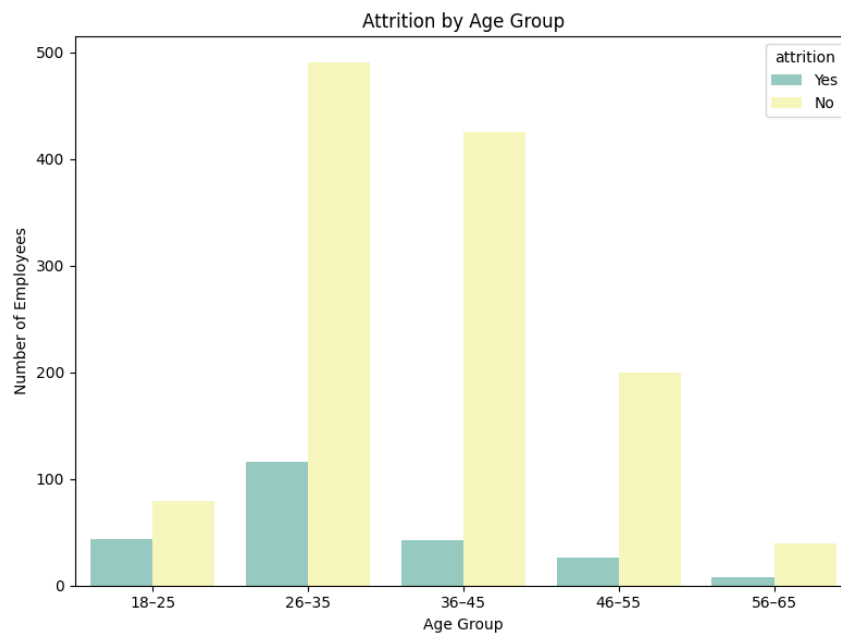
4. Monthly Income vs Attrition

Insight: Employees who left typically earn less than those who stayed.



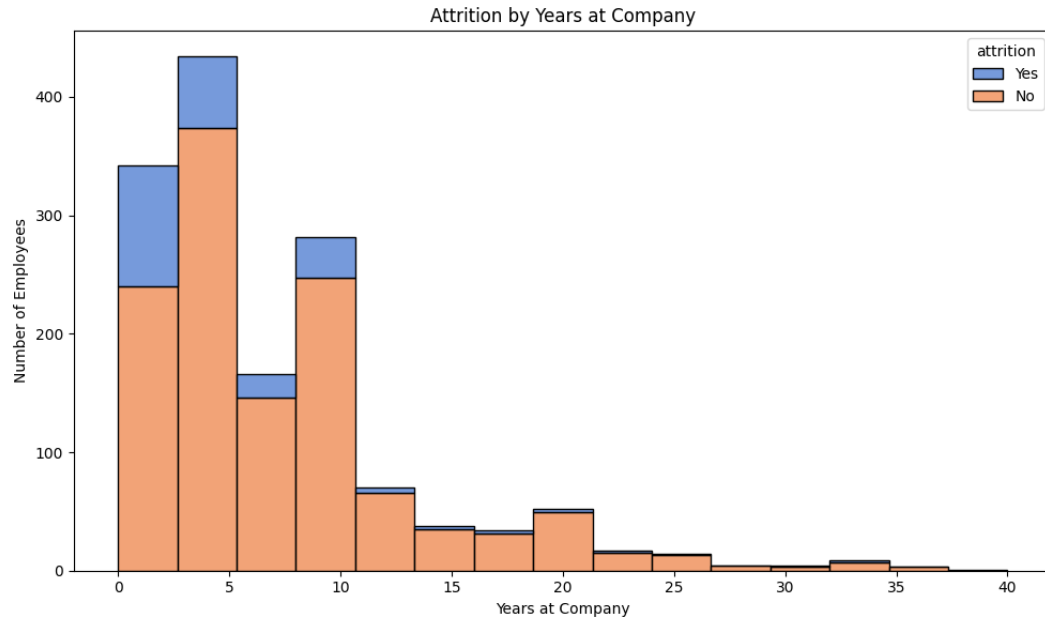
5. Age Group vs Attrition

Insight: Attrition is highest among employees aged 18–35.



6. Years at Company

Insight: Most attrition occurs within the first 3 years of employment.



Summary of Findings

- Overtime, low income, and early-career stage are strong indicators of attrition.
- 16.1% of employees left the company.
- Employees with lower monthly income are more likely to leave.
- Attrition is most common among younger employees and those with under 3 years at the company.
- Sales and Research roles show higher risk of turnover.
- Younger employees and those with less tenure need targeted retention support.

HR Recommendations

- Introduce flexible work options to reduce burnout in overtime, heavy roles.
- Review compensation structures for fairness and market alignment.
- Invest in early career mentorship and engagement programs.
- Identify high risk roles and provide tailored retention strategies.
- Conduct stay interviews during the first year of employment to proactively address concerns

Tools Used

- Python (pandas, seaborn, matplotlib)
- Microsoft Excel (for data validation)
- VS Code (for scripting)