

HR Analytics Dashboard

Overview

This project focuses on analyzing employee attrition using **Tableau**. The goal was to build a compelling and interactive dashboard that helps organizations understand **why employees leave**, uncover key factors influencing turnover, and guide HR departments toward **data-driven retention strategies**.

The dataset contains various HR metrics such as employee demographics, satisfaction levels, overtime, compensation, and work-life balance, providing a rich foundation for analyzing workforce behavior and attrition trends.

Objective

To create an interactive, insightful Tableau dashboard that allows HR professionals and management teams to:

- Identify the main causes of employee attrition.
- Visualize workforce trends across departments and demographics.
- Support strategic decision-making to improve employee satisfaction and retention.

Understanding the Dataset

The dataset included several columns such as:

- **EmployeeID**
- **Age**
- **Gender**
- **Department**
- **MonthlyIncome**
- **YearsAtCompany**
- **OverTime**

- **JobSatisfaction**
- **WorkLifeBalance**
- **TrainingTimesLastYear**
- **Attrition**

Each variable helped reveal unique aspects of workforce dynamics. For instance, *JobSatisfaction* and *WorkLifeBalance* helped assess employee engagement, while *YearsAtCompany* and *MonthlyIncome* highlighted experience and compensation levels.

Before analysis, unfamiliar variables such as **Attrition** (Yes/No) were verified to ensure clarity and consistency in representation.

Data Cleaning and Preparation

After exploring the dataset, a few issues were discovered that could impact the analysis:

- Duplicate entries based on EmployeeID.
- Inconsistent categorical values in “Department” and “Gender.”
- Missing data in satisfaction-related fields.

Actions taken:

- Removed duplicate records.
- Standardized categorical variables (e.g., unified gender representation, consistent department naming).
- Filled missing data where appropriate using median or mode imputation.
- Verified numerical columns for formatting accuracy (e.g., MonthlyIncome as numeric).

This process ensured the dataset was clean, structured, and ready for Tableau visualization.

Key Focus Areas for Dashboard

Based on HR and management goals, the analysis focused on these major metrics:

- **Attrition Rate by Department and Gender**
- **Job Satisfaction vs. Attrition**
- **Impact of Overtime on Attrition**
- **Income Distribution Across Employees**
- **Work-Life Balance Trends**
- **Attrition by Years at Company**

These metrics directly address management's core question: *"Who is leaving, why are they leaving, and how can we prevent it?"*

Dashboard Development

The dashboard was designed entirely in **Tableau**, emphasizing clarity, interactivity, and storytelling.

Key design components:

- **KPIs and Metrics Cards** – Displaying overall attrition rate, average income, and average satisfaction.
- **Bar & Pie Charts** – Comparing attrition across departments, gender, and overtime status.
- **Line Charts** – Showing attrition trend by years of experience.
- **Filters & Parameters** – Allowing users to drill down by department, gender, and work-life balance.
- **Color Coding** – Used deep sky blue hues for high attrition, and gold for retention, and blue for balanced trends.

Each visual was selected for interpretability and aligned with stakeholder priorities, making the dashboard both analytical and presentation-ready.

Outcome & Value

The final dashboard provided HR managers and decision-makers with:

- **A clear understanding of workforce attrition patterns.**
- The ability to **filter and segment employees dynamically.**
- **Actionable insights** into job satisfaction, overtime, and compensation relationships.

For HR teams, it transforms raw data into a visual tool that supports:

- Early identification of at-risk employees.
- Better resource allocation toward engagement initiatives.
- Strategic planning for workforce stability and growth.

Stakeholder

- **Human Resources Department** – The main decision-makers who manage workforce retention and employee engagement.

Value to Stakeholders

The dashboard enables stakeholders to:

- Identify departments with high turnover and analyze underlying causes.
- Detect patterns in overtime and dissatisfaction that lead to attrition.
- Formulate policies that enhance work-life balance and job satisfaction.
- Reduce recruitment costs through proactive retention efforts.

Key Insights from the Analysis

- **Job Satisfaction:** Employees with low satisfaction scores have the highest attrition rates.
- **Overtime:** Staff who frequently work overtime are more likely to leave.

- **Work-Life Balance:** Poor balance correlates strongly with turnover.
- **Experience Level:** Employees with 3–7 years at the company are at peak attrition risk.
- **Compensation:** Departments with below-average income show higher attrition.
- **Training:** Increased training frequency contributes to higher retention.

Tools Used

- **Tableau** – for analysis and visualization.
- **Excel/CSV** – for data preprocessing and structure validation.
- **Research & Documentation** – to understand HR metrics and visualize findings effectively.

Summary

This case study demonstrates how HR data can be transformed into an actionable, interactive decision-support system using Tableau.

It highlights not only technical expertise in dashboard development but also a strategic understanding of how data storytelling drives business outcomes.

The **HR Analytics Dashboard** empowers organizations to reduce turnover, enhance employee satisfaction, and align workforce management with long-term business goals.