Employee Attrition Analysis

Kholoud khaled othman

Overview

Introduction

High employee turnover affects organizational performance and costs.

Understanding attrition drivers helps HR make informed decisions.

Goal: Use data to explore and mitigate employee attrition.

Business questions

- What are the primary factors that contribute to employee attrition?
- What is the relationship between monthly income and attrition rates?
- How do work-life balance ratings differ between employees who stay and those who leave?
- Which job roles have the highest and lowest attrition rates?
- How does the number of promotions affect employee retention?
- What is the impact of remote work options on employee satisfaction and retention?

Overview of the Dataset

The dataset contains 21 columns, covering employee demographics, job details, compensation, performance, and retention.

The goal is to analyze how these features relate to the target variable: attrition (Stayed/Left).

👤 Demographics: employee_id, gender, age, marital_status, number_of_dependents

💼 Job Details: job_role, job_level, years_at_company, remote_work, number_of_promotions

💰 Compensation: monthly_income, income_category

🎓 Education & Performance: education_level, performance_rating, job_satisfaction, work-life_balance

🕐 Work Habits: overtime, distance_from_home

🏆 Recognition & Retention: employee_recognition, hiring_year, attrition
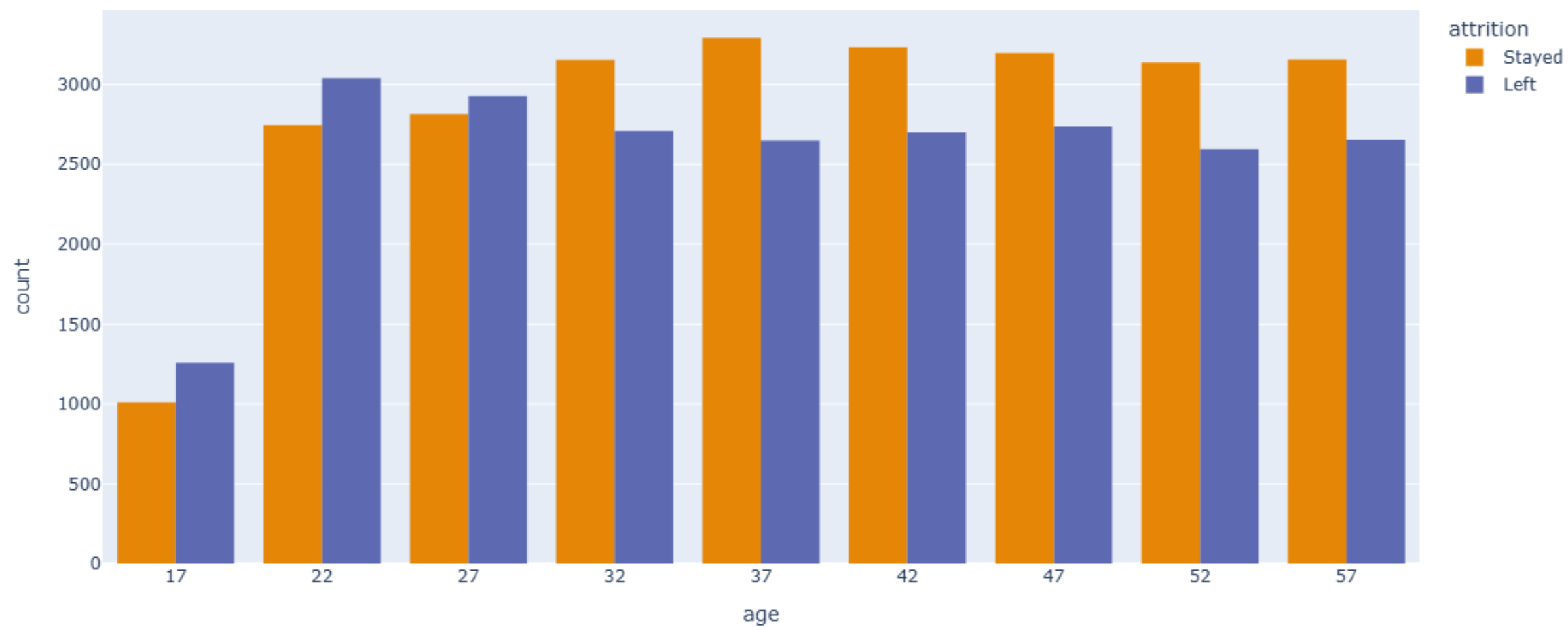
Statistics

Attrition by Demographics Statistics

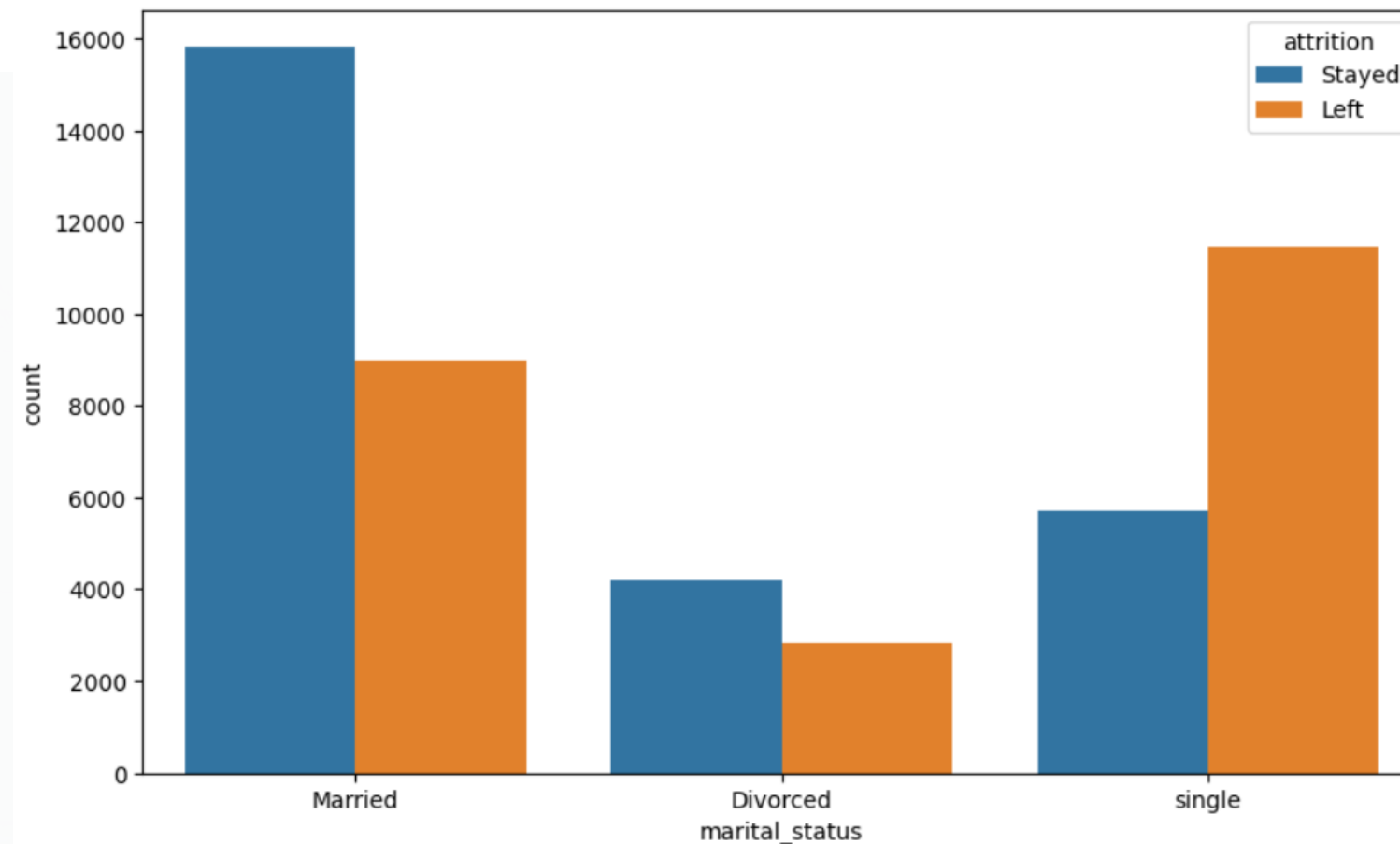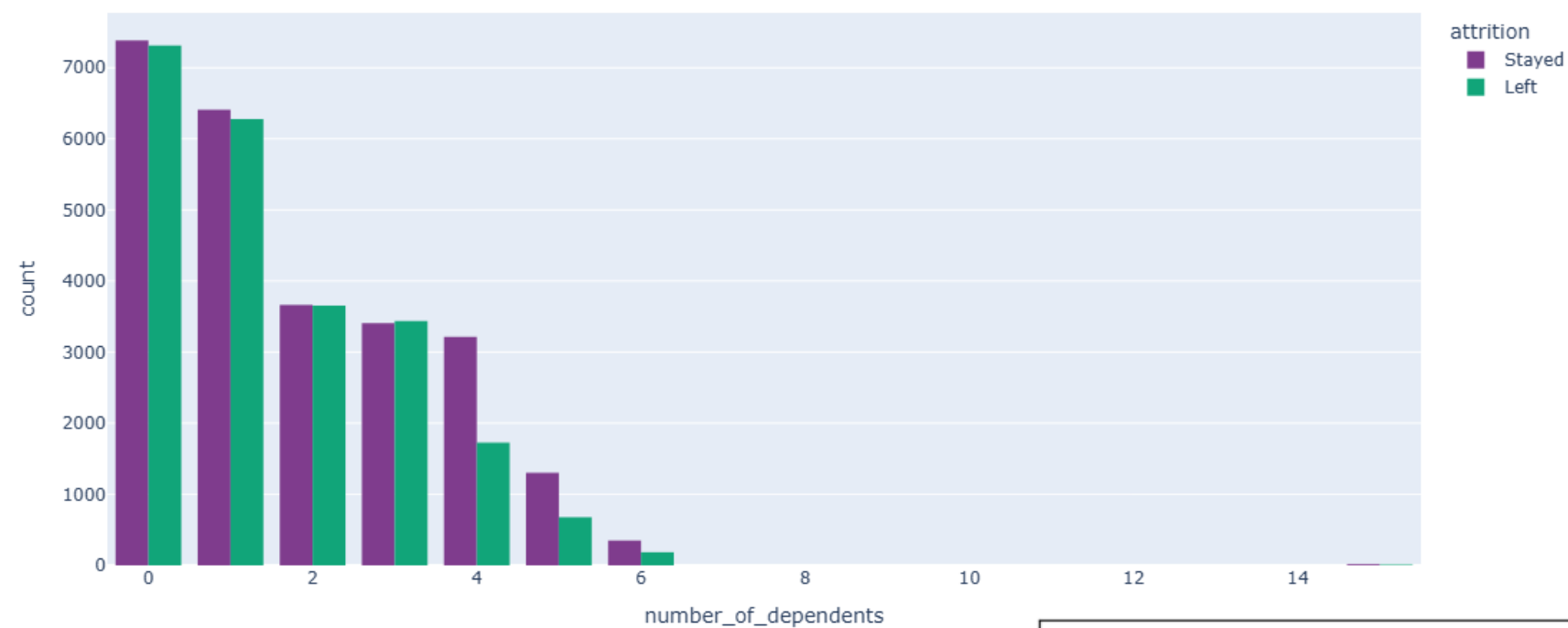Age: Younger employees show slightly higher attrition.

Gender: Slightly even distribution , gender may not have a strong or significant effect on attrition.

Marital Status: Single employees more likely to leave.

Dependents: Employees with fewer dependents tend to leave more often.
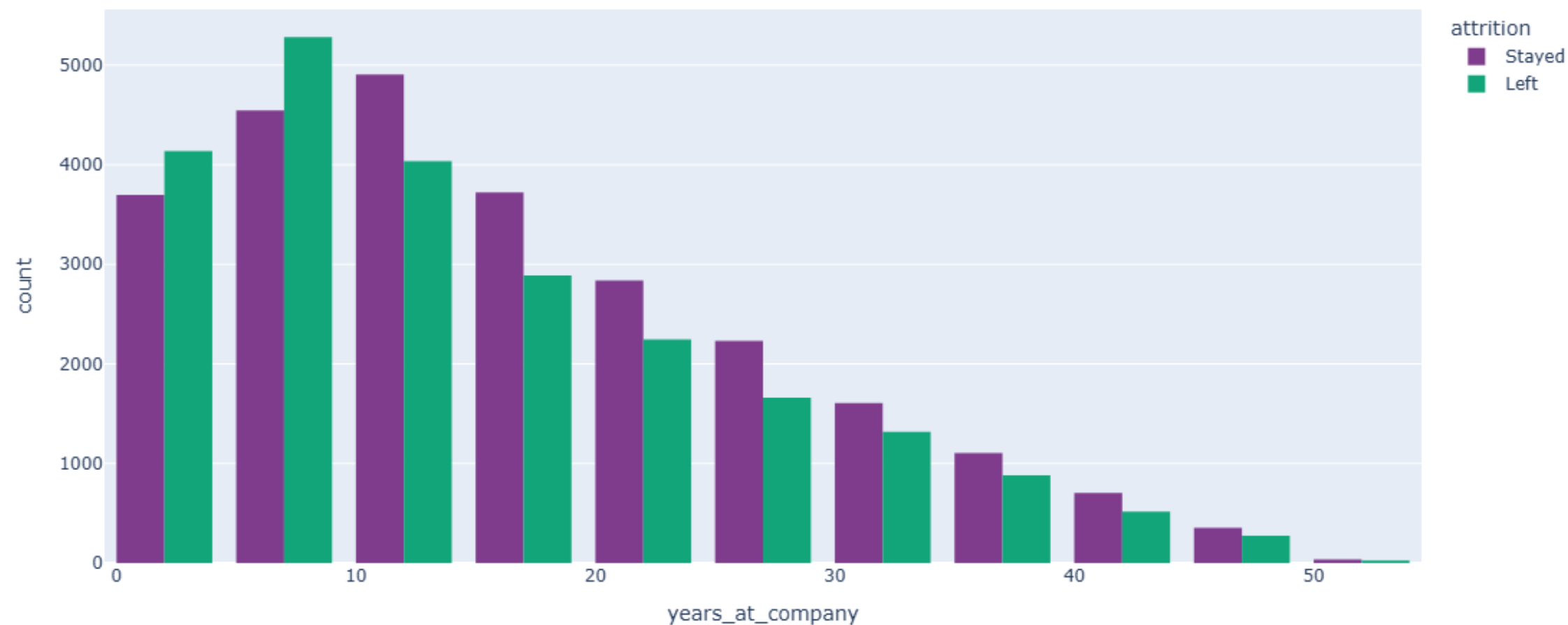
Attrition by Demographics Statistics
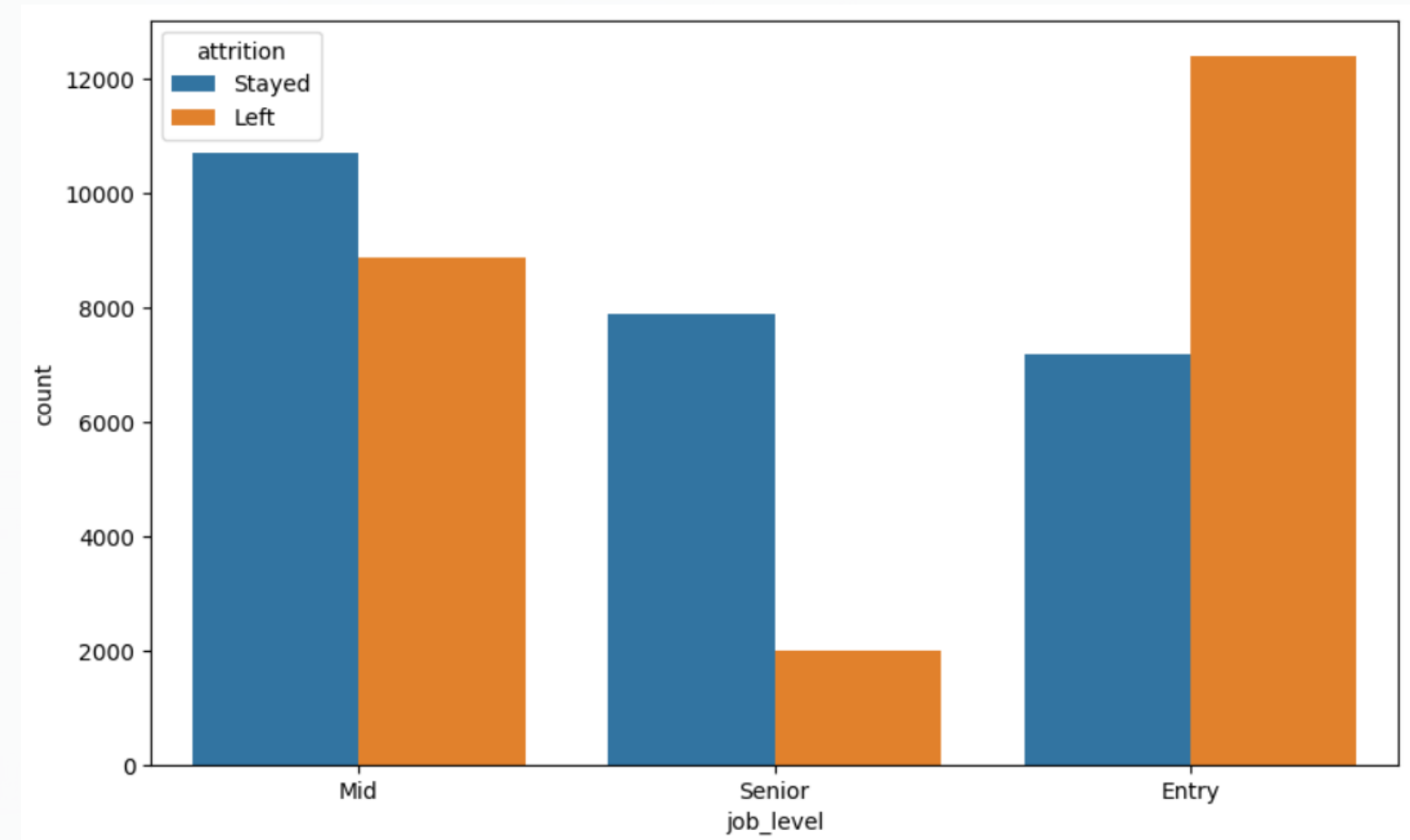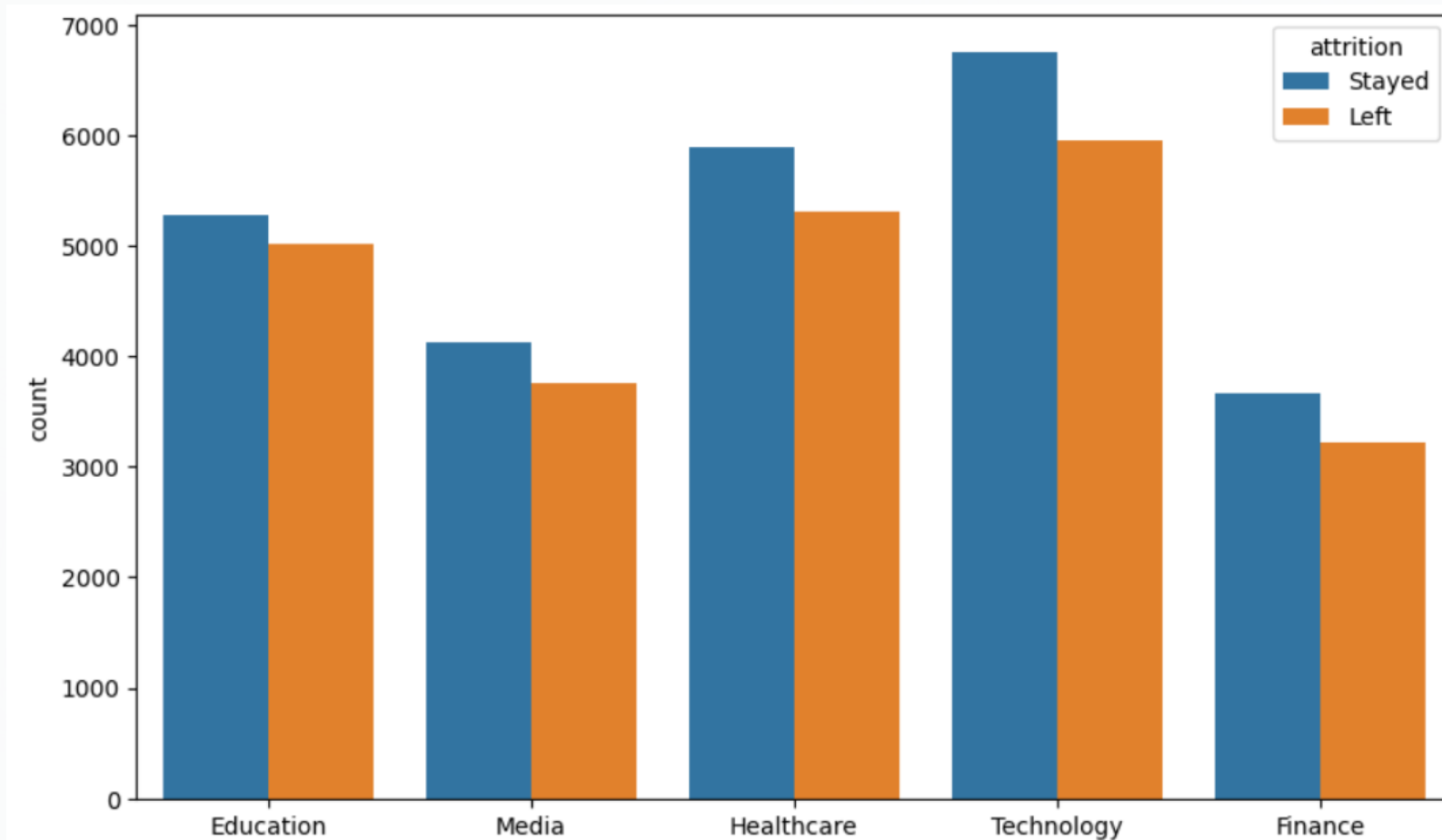
Job Role and Tenure Statistics

Job Role: Attrition varies by role (e.g., Media & Education show differences).

Job Level: Lower levels tend to have higher turnover.

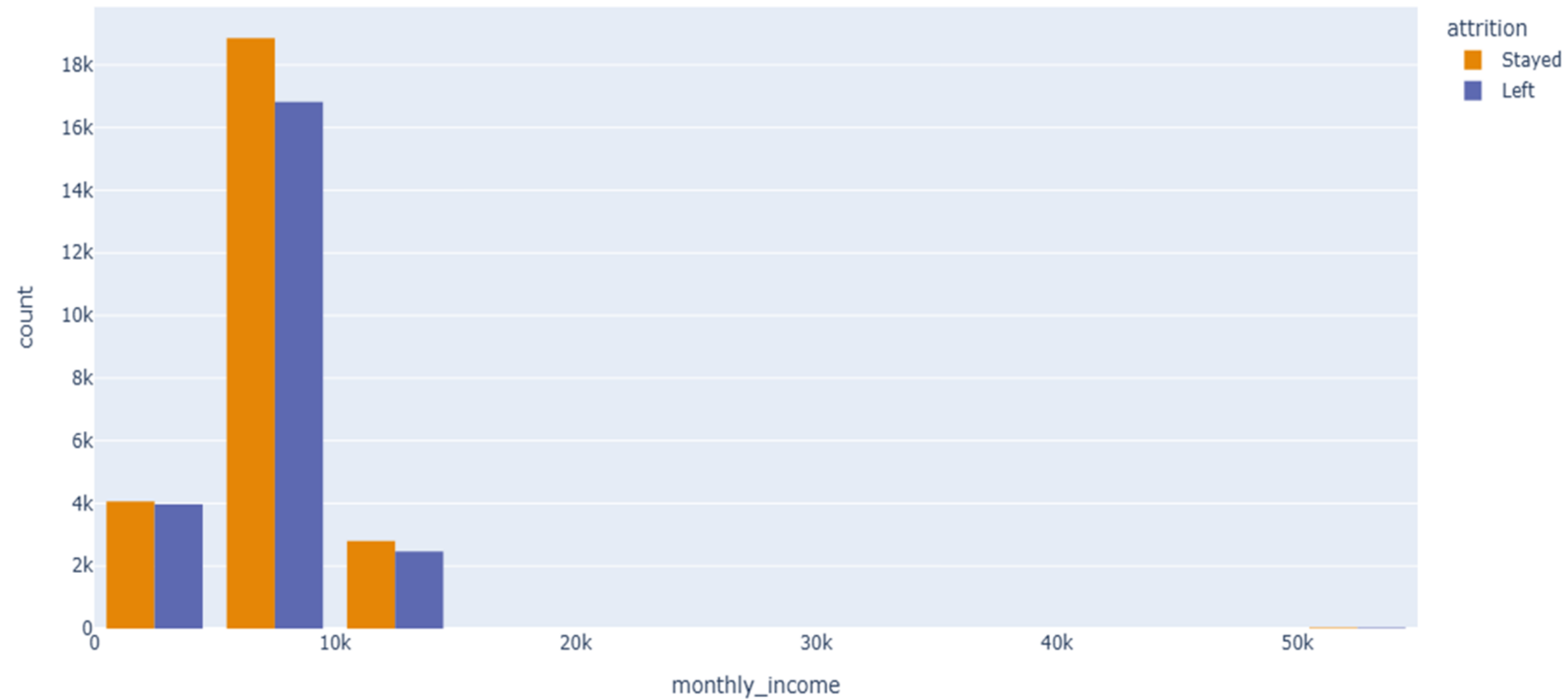Years at Company: Newer employees (0–5 years) have higher attrition.
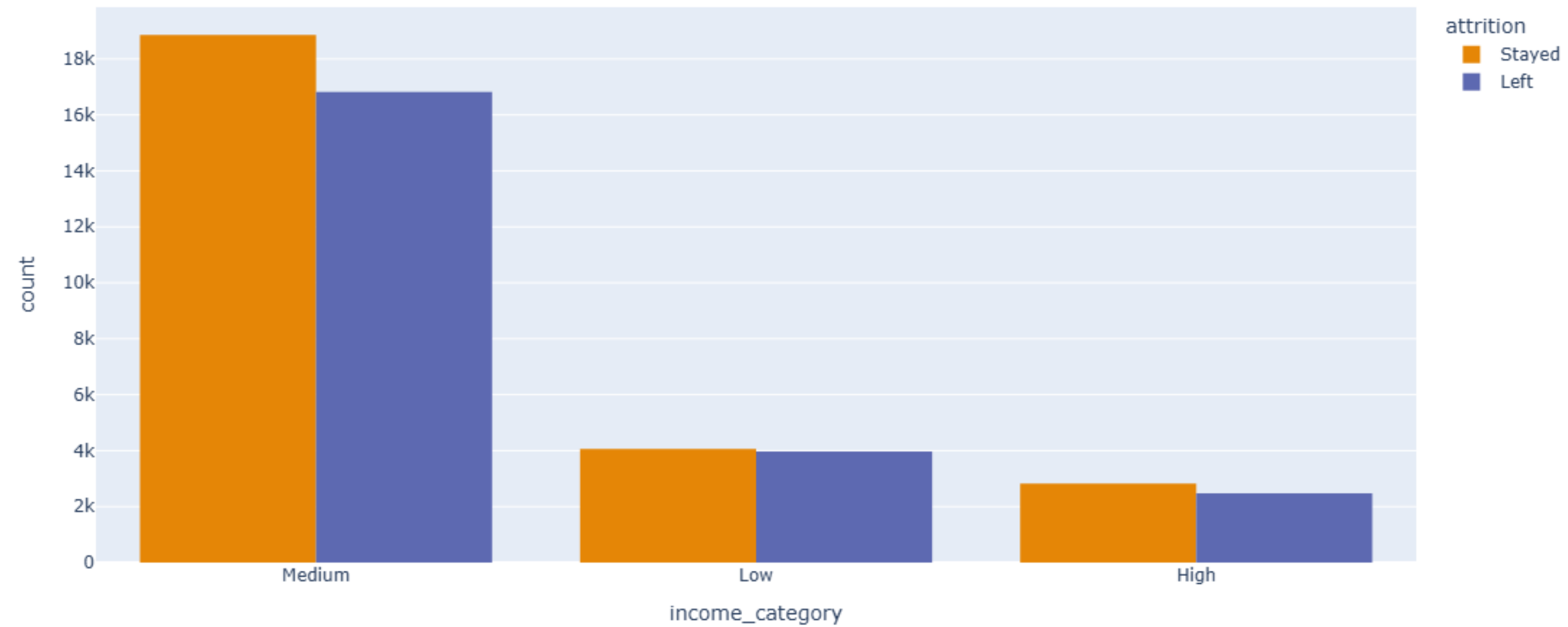
Job Role and Tenure Statistics

Compensation Insights

Monthly Income: Lower-income groups exhibit higher attrition.
Income Category: "Low" and "Medium" categories more prone to attrition.
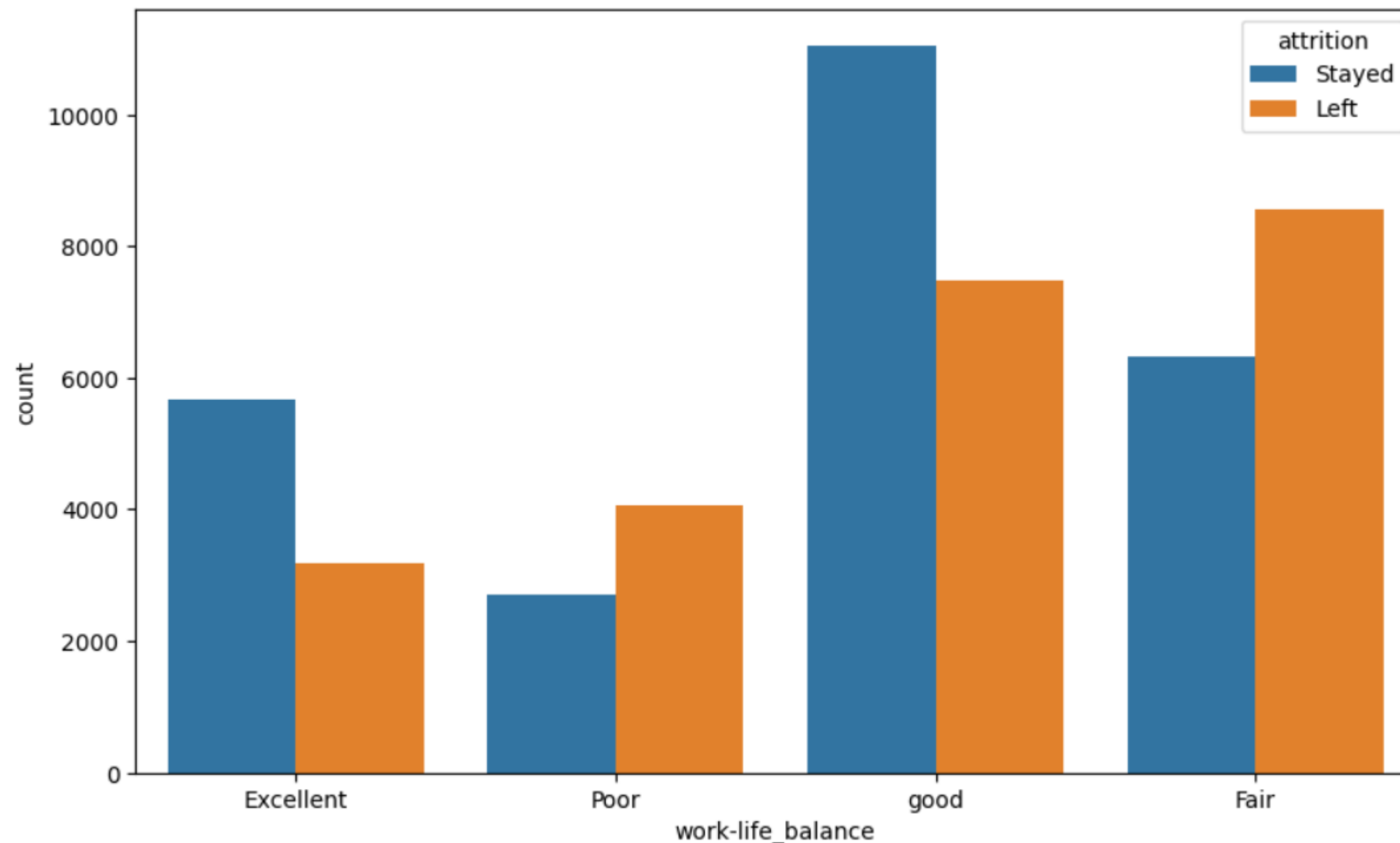
Compensation Insights

Education & Performance Statistics

Work-Life Balance: Poor work-life balance is linked to increased attrition.
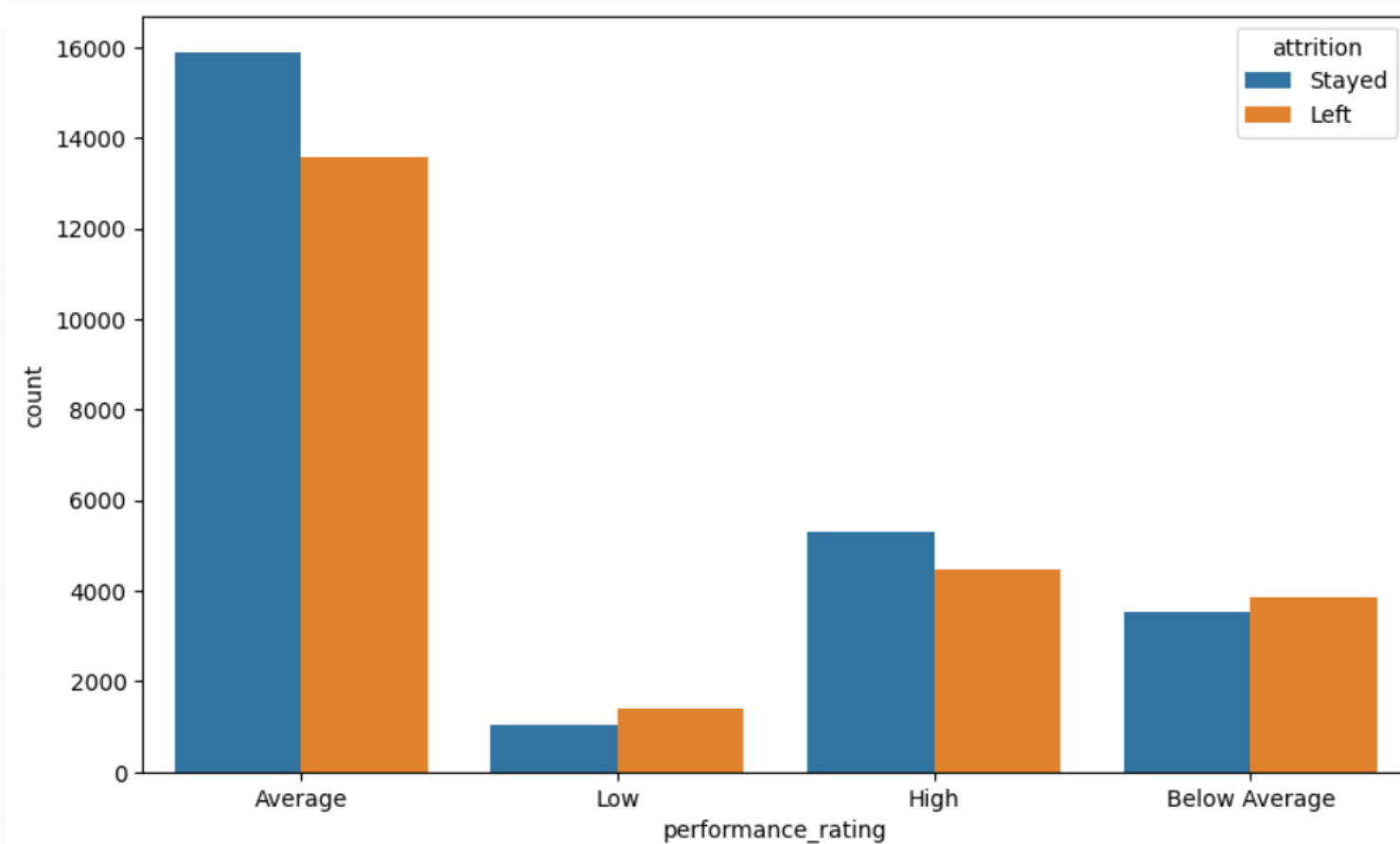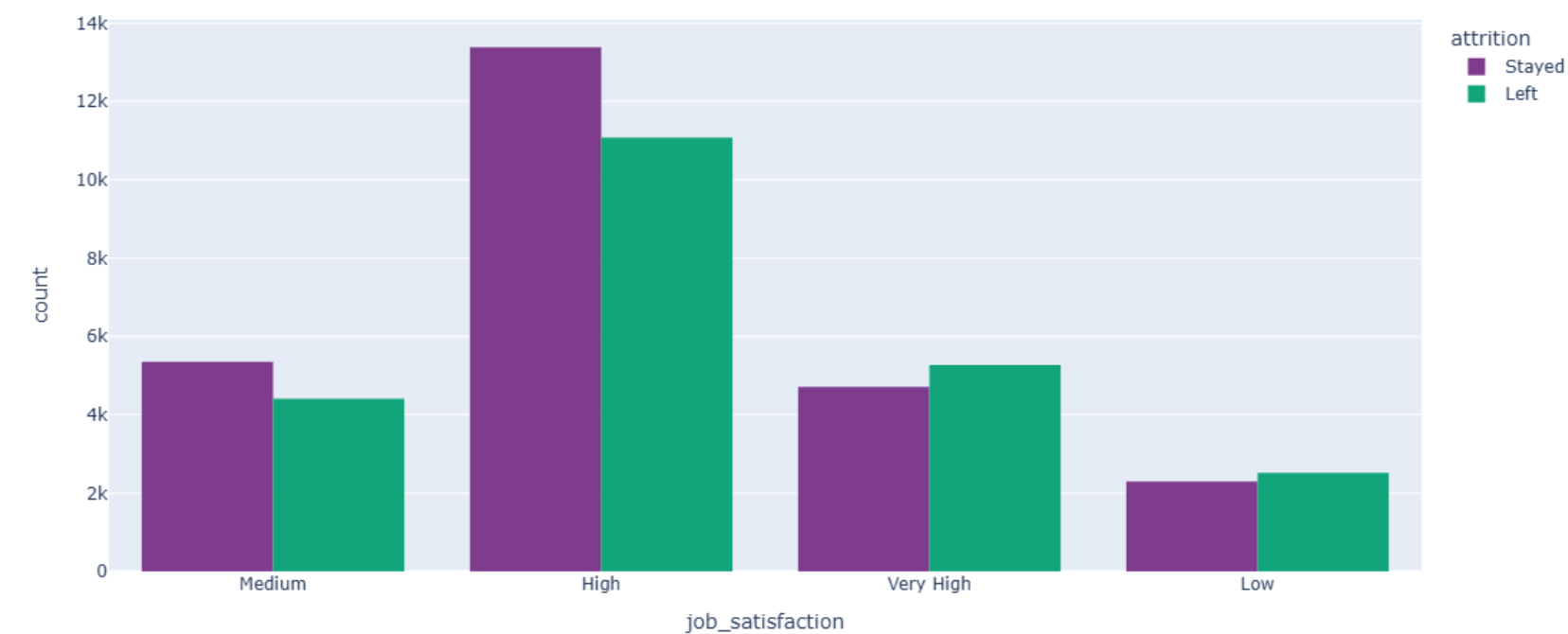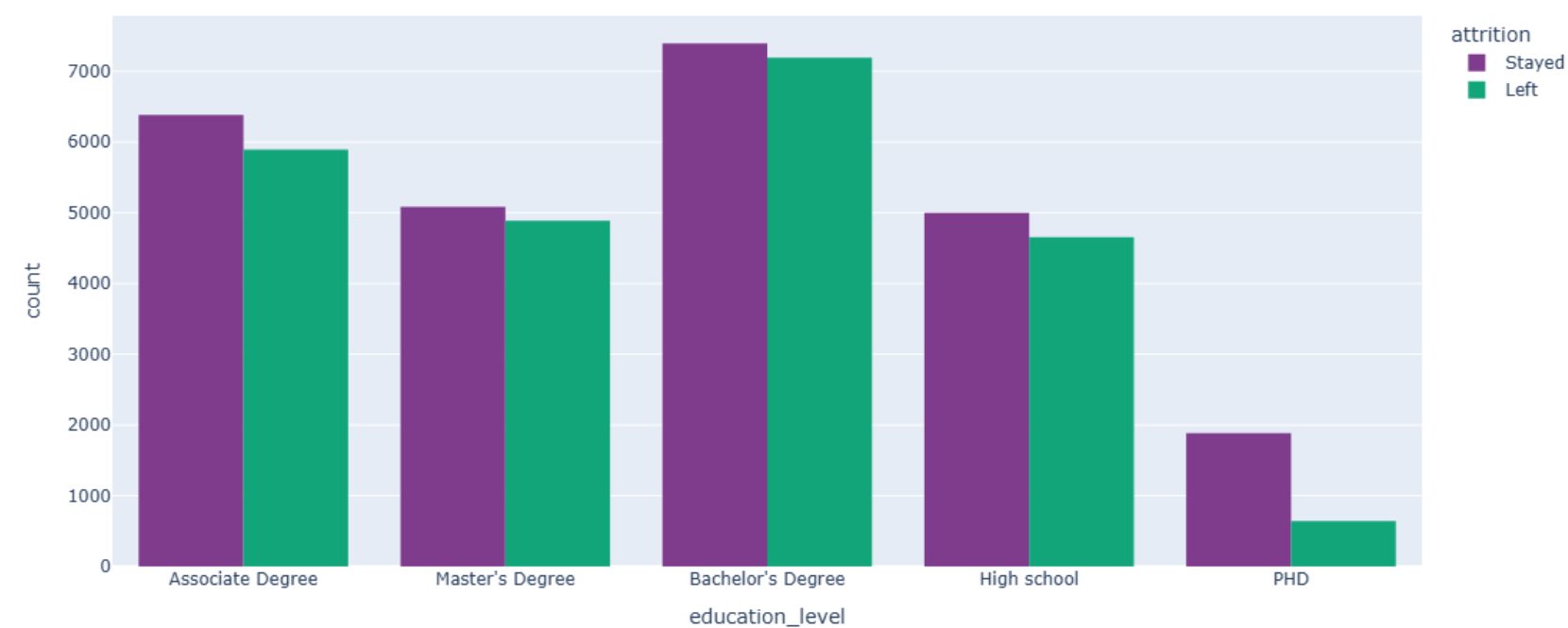
Education Level: Mixed impact; no clear trend.

Job Satisfaction: The effect of job satisfaction rating on attrition has Mixed impact no clear trend.

Performance Rating: Low-rated performers are more likely to leave.
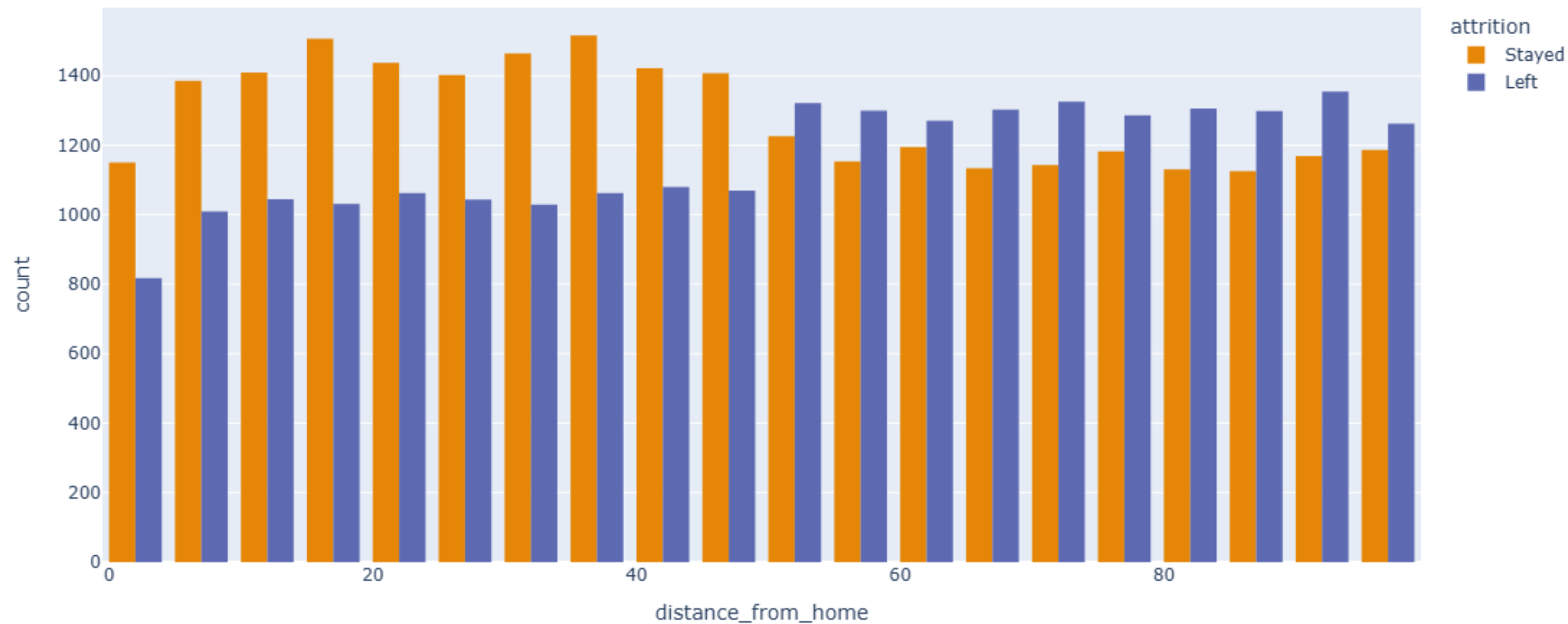
Education & Performance Statistics

Work Habits and Distance Statistics

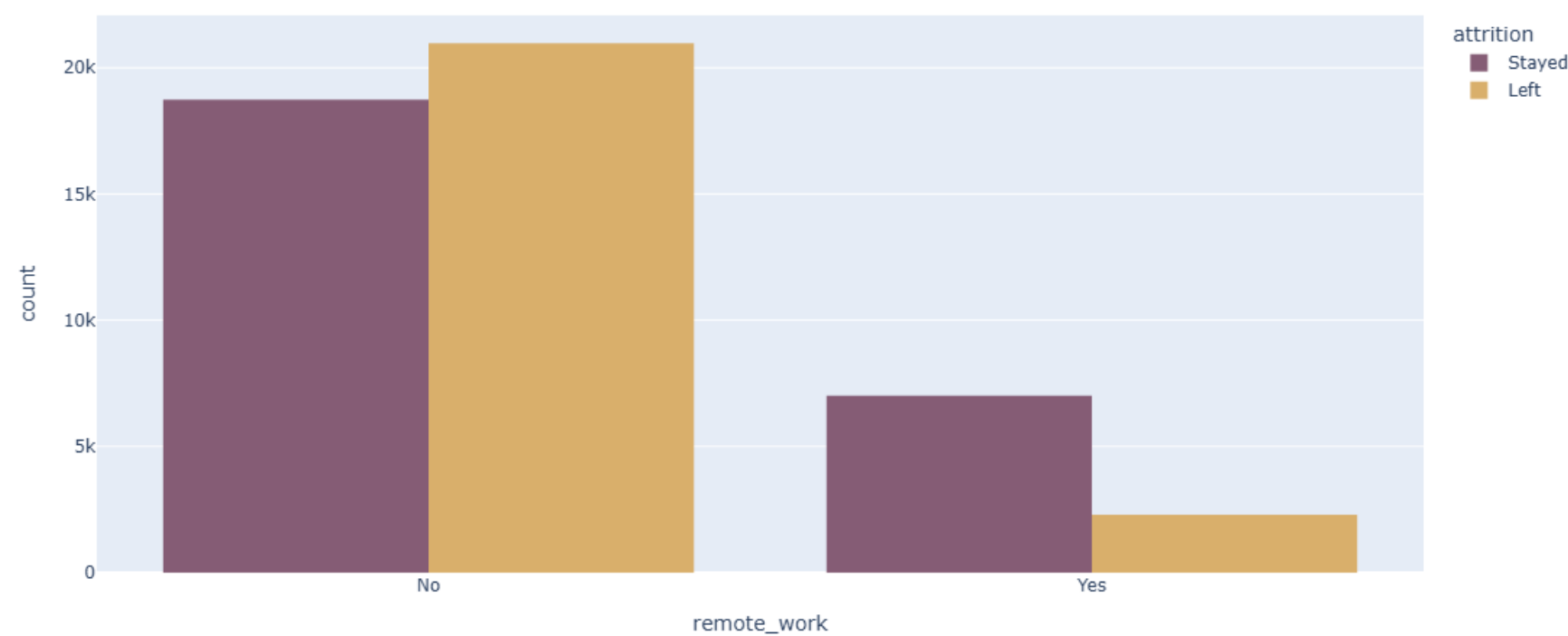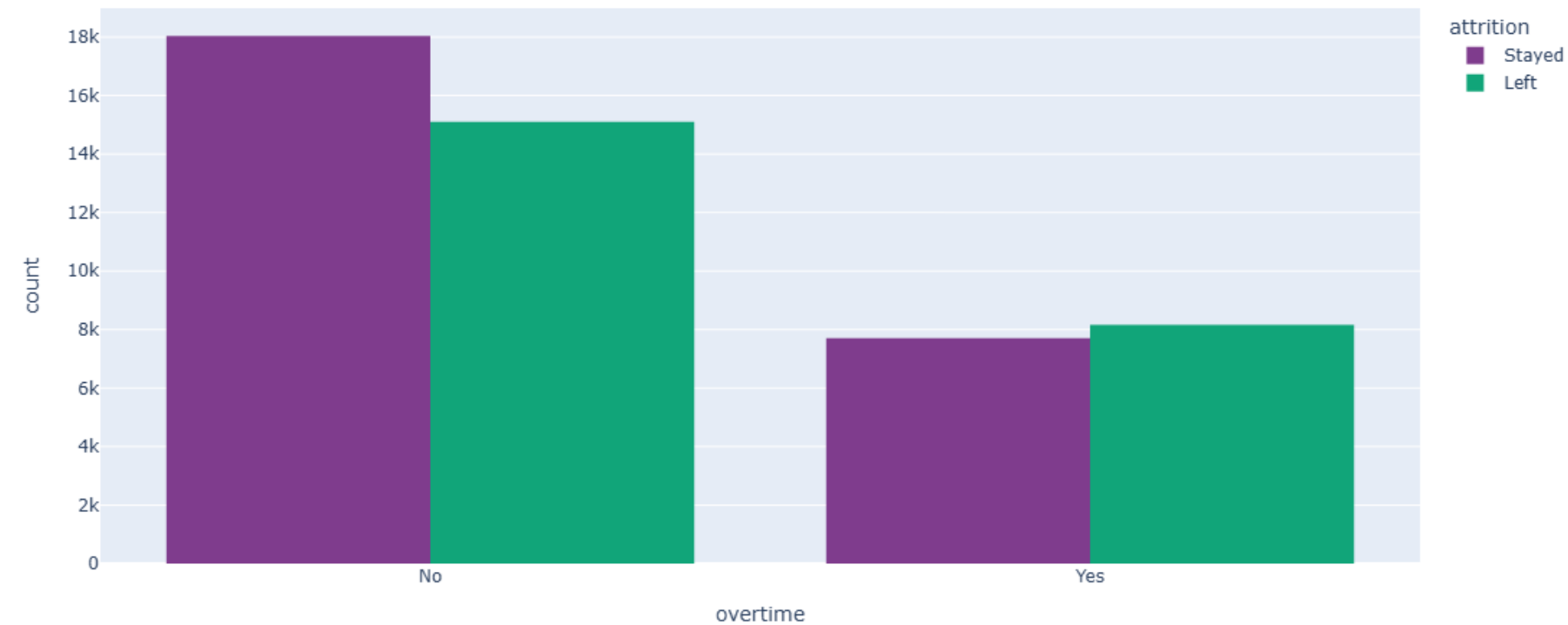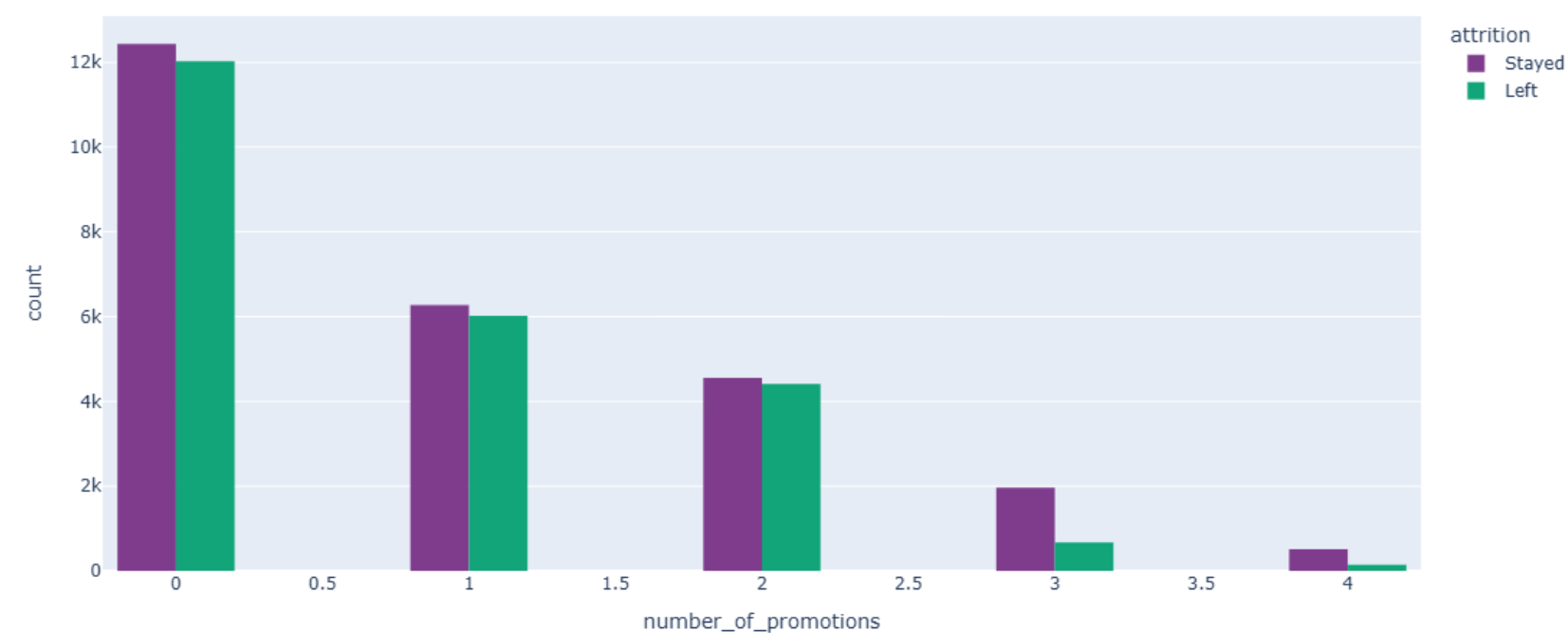Overtime: Employees working overtime are more likely to leave.

Remote Work: Remote workers show lower attrition overall.

Distance from Home: Longer commutes slightly increase attrition.

Number of Promotions: Employees with fewer or no promotions are more prone to attrition.
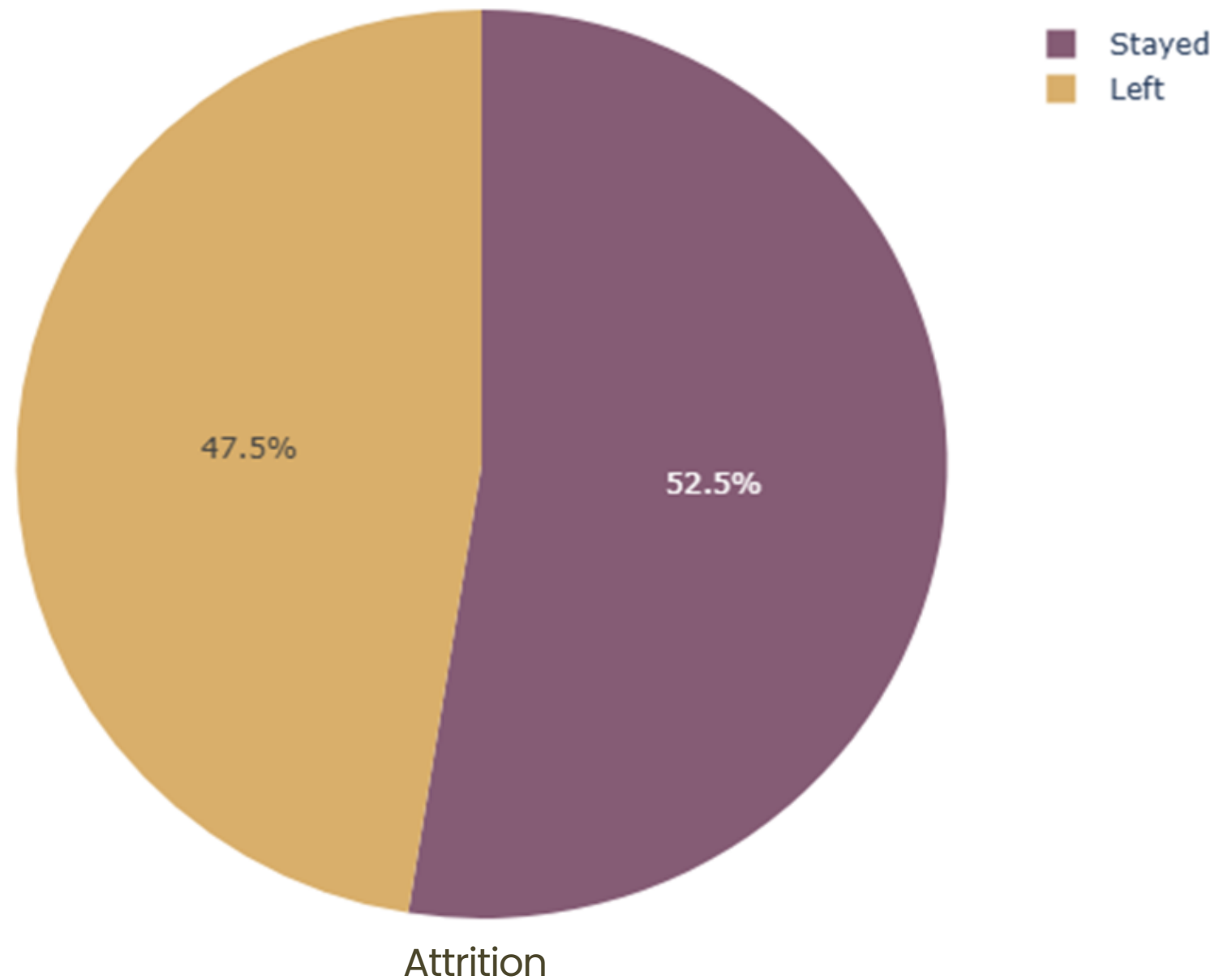
Work Habits and Distance Statistics

Recognition & Retention

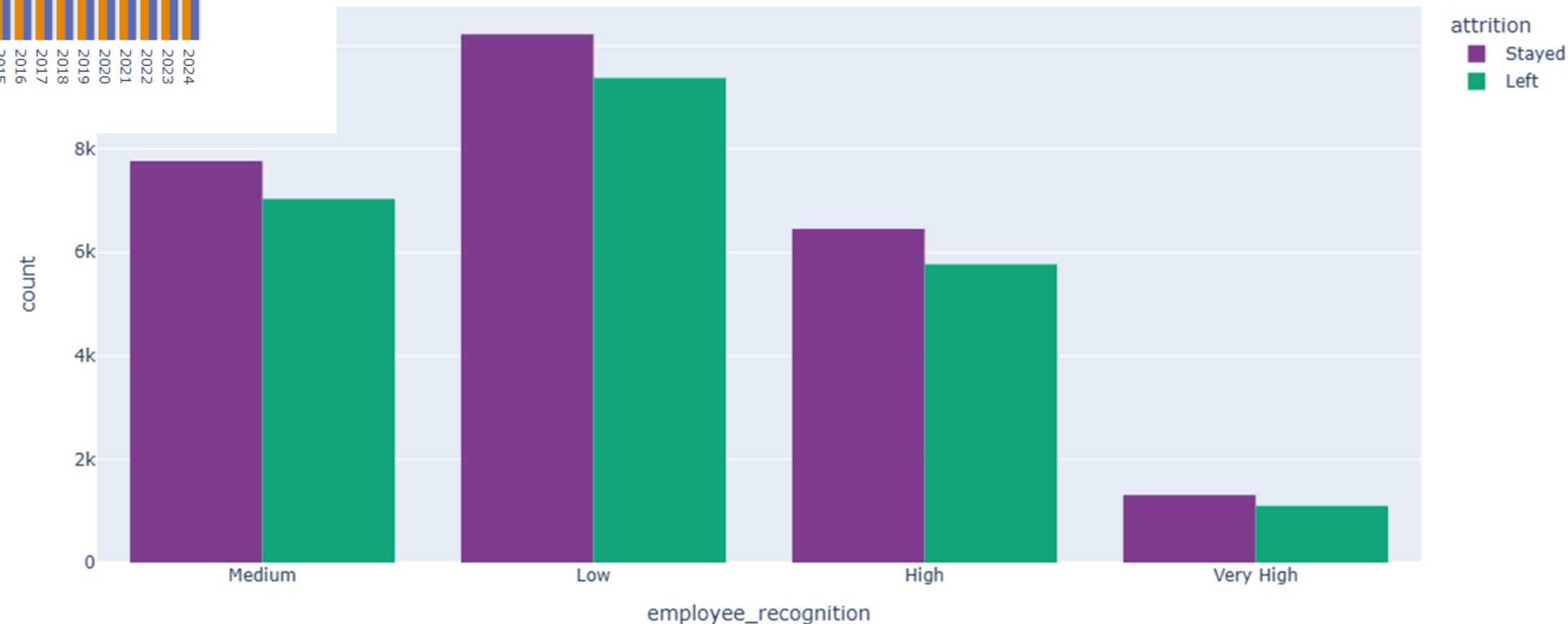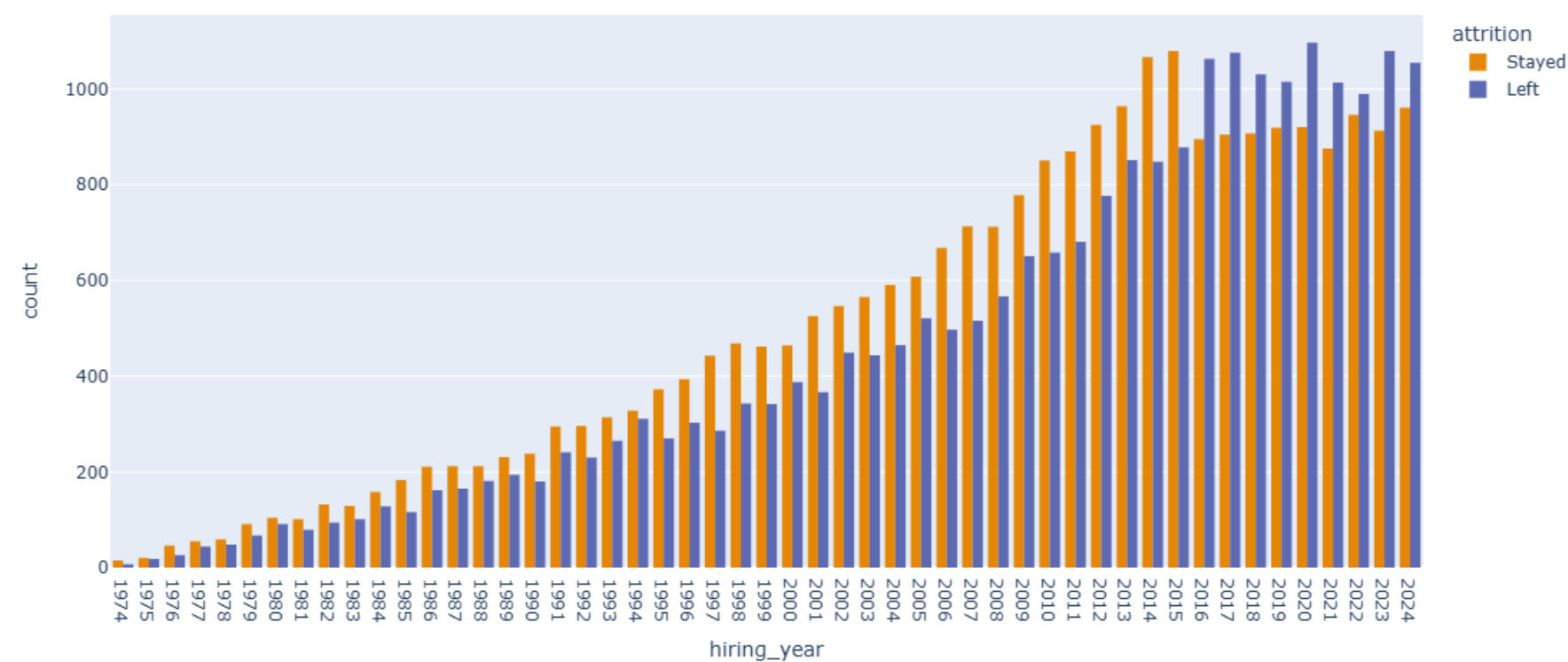Attrition: employee (Stayed/Left).

Employee Recognition: Employees with low recognition levels show higher attrition rates.

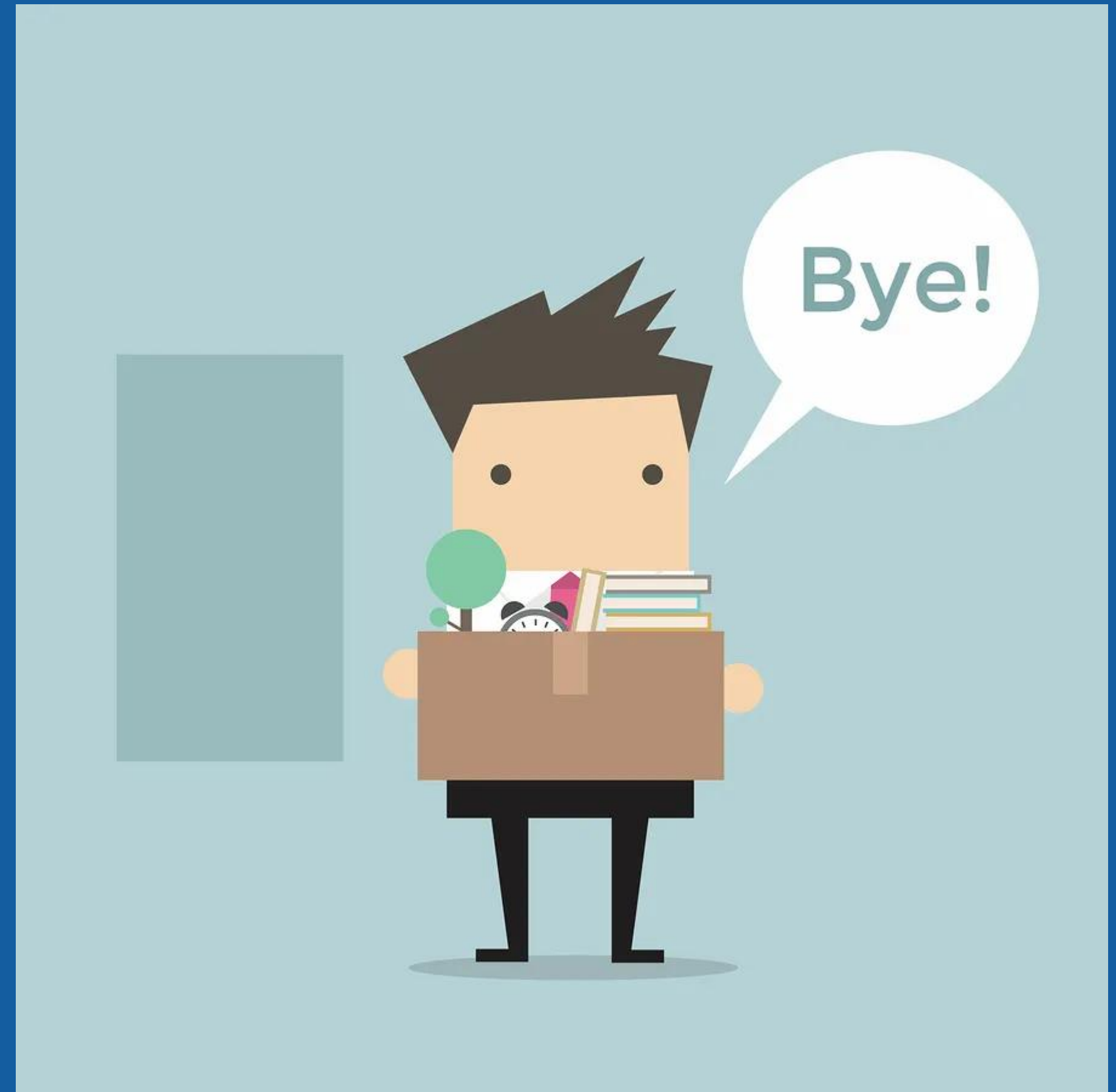Hiring Year: Recent hires (post-2018) show higher turnover.

Attrition

Recognition & Retention

View of Key Drivers

Most impactful columns on attrition:

- Monthly Income
- Years at Company
- Overtime
- Distance from Home
- Work life balance
- Employee Recognition

Findings & Recommendations

Compensation Level
🔍 Employees with lower compensation tend to leave more frequently
☑ Solutions:
- Implement structured compensation bands
- Offer performance-based incentive programs

Employee recognition
🔍 Employees with low recognition levels show higher attrition rates.
☑ **Solutions:**
• Celebrate milestones and outstanding performance
• Link recognition with meaningful rewards

Employees tenure(years at company)
🔍 Employees at small tenure stages are more likely to leave
☑ Solutions:
- Conduct regular career development conversations
- Create transparent promotion pathways

Commuting Distance
🔍 Longer commutes impact retention
☑ Solutions:
- Develop remote/hybrid work options
- Provide commuting support programs
- Allow flexible arrival/departure times

Work Hours & Overtime
🔍 Excessive overtime correlates with higher attrition
☑ Solutions:
- Establish reasonable overtime limits
- Provide overtime compensation alternatives

Work-Life Balance
🔍 Poor work-life balance drives turnover
☑ Solutions:
- Implement flexible scheduling options
- Encourage proper break periods

Thank you

For watching this presentation