

Project: Human Resources Dataset Analysis

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1. Employee Attrition Analysis

Scope: Understand the factors that contribute to employee turnover.

- **Questions:**
 - What are the key drivers of employee attrition (e.g., age, gender, distance from home, salary, overtime, performance)?
 - Does business travel frequency affect attrition rates?
 - How does the number of years with the current manager relate to attrition?
 - Which departments or job roles have the highest attrition rates?
 - What is the attrition trend over time?

2. Diversity and Inclusion

Scope: Analyze the workforce diversity based on gender, ethnicity, and other factors.

- **Questions:**
 - What is the gender and ethnic breakdown of employees across departments and job roles?
 - Are certain demographic groups (e.g., gender, ethnicity) more likely to be promoted or experience attrition?
 - Is there a salary gap based on gender, ethnicity, or education?

3. Promotion and Career Progression

Scope: Study promotion trends and career growth within the organization.

- **Questions:**
 - How many employees have been promoted, and what factors contribute to promotions (e.g., education, years since last promotion, years in current role)?
 - Are employees in certain departments more likely to be promoted?

- What is the average time between promotions, and does it vary by department or job role?
- Are certain employee groups (gender, ethnicity) more likely to experience faster career progression?

4. Work-Life Balance

Scope: Assess the impact of work-life balance factors (e.g., overtime, business travel, distance from home) on employee satisfaction and retention.

- **Questions:**

- Does the number of overtime hours correlate with attrition?
- Is there a relationship between business travel and employee turnover?
- Do employees who live farther from the workplace have higher attrition rates or lower job satisfaction?

5. Compensation and Benefits Analysis

Scope: Examine salary structure, stock options, and their impact on employee satisfaction and retention.

- **Questions:**

- How does salary vary by department, job role, education level, and years at the company?
- Is there a relationship between salary, stock options, and attrition?
- Are employees with higher stock option levels less likely to leave the company?

6. Tenure and Job Stability

Scope: Analyze employee tenure and stability within the company.

- **Questions:**

- What is the average tenure of employees, and how does it vary by department or job role?
- How does the number of years at the company relate to attrition or promotions?

- Is there a significant difference in tenure between different education fields or job roles?

7. Education and Job Fit

Scope: Evaluate the impact of education on job roles, performance, and retention.

- **Questions:**

- How does education level correlate with salary, job role, or department?
- Are employees with specific educational backgrounds (e.g., engineering, business) more likely to be promoted or stay longer at the company?
- Does the field of education affect job performance or career progression?

8. Managerial Influence

Scope: Explore the role of managers in employee retention and satisfaction.

- **Questions:**

- How does the number of years with the current manager impact employee attrition or promotion?
- Do employees with longer relationships with their managers have higher job satisfaction or better career progression?
- Is there a correlation between managerial tenure and department attrition rates?

9. Departmental Performance

Scope: Understand the dynamics and performance of different departments.

- **Questions:**

- Which departments have the highest and lowest attrition rates?
- What is the average salary and tenure in each department?
- Are certain departments more prone to promotions or turnover?
- Do certain departments have more travel frequency than other departments?

10. Geographical Impact

Scope: Analyze the effect of geographical location (state, distance from home) on job satisfaction, attrition, and performance.

- **Questions:**

- Does distance from home affect employee attrition or job satisfaction?
- Are employees in certain states or regions more likely to stay with the company longer?
- How do salary and job satisfaction vary by geographical location?
- How is employee distribution across states?

11. Correlation Between Factors

Scope: Investigate relationships between multiple factors to identify patterns.

- **Questions:**

- What are the correlations between salary, overtime, years at the company, and attrition?
- Does education level correlate with the number of years since the last promotion?
- How do marital status and age affect attrition rates or promotion likelihood?

By focusing on these areas, we can derive actionable insights that could help in decision-making, improving retention strategies, and fostering a more inclusive and rewarding workplace.