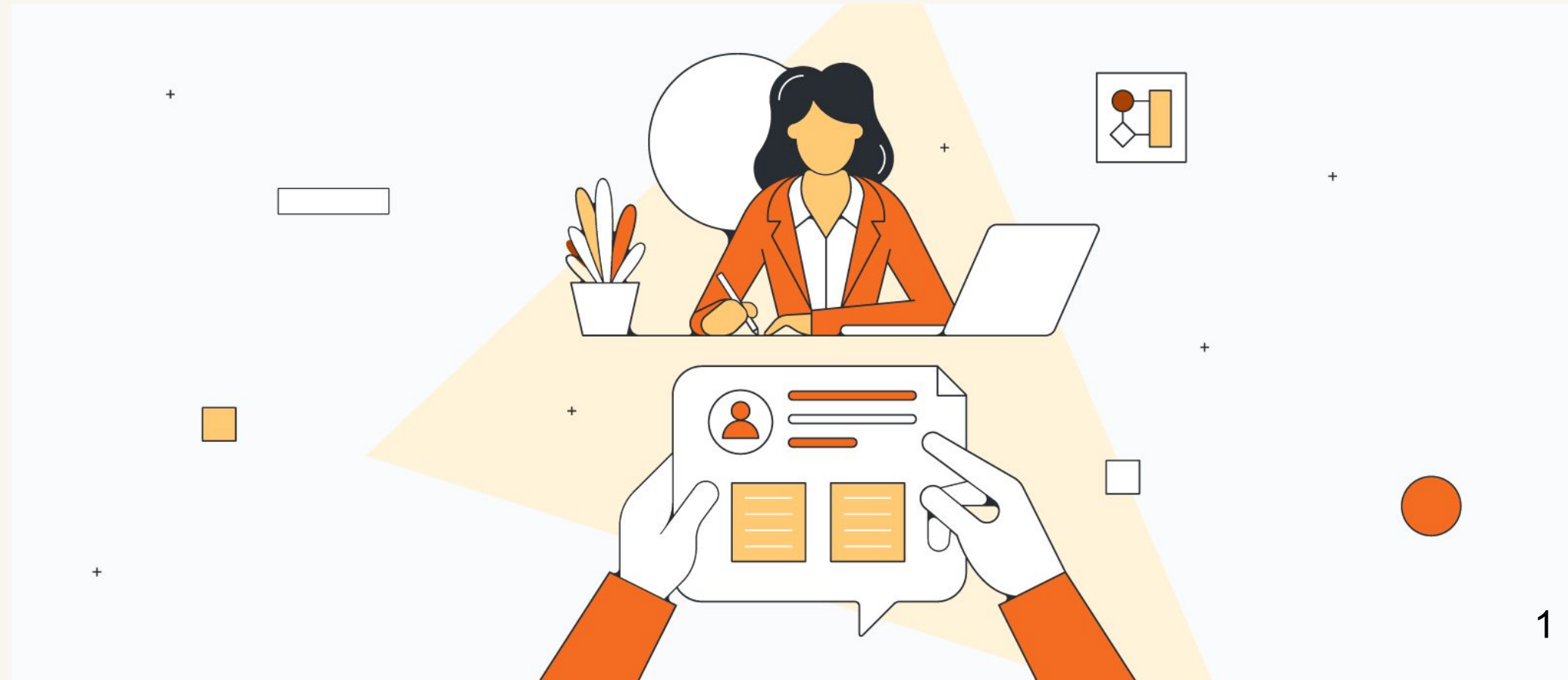# HR Analytics Project: Empowering HR with Data

This presentation showcases a data analysis project addressing key HR goals:

- Retention,
- Hiring,
- Workforce Management,
- Retrenchment and Promotions.

Business Objectives: Understanding HR Needs

Demographic Trends

- **Gender**: What is the current gender balance in the workforce?
- **Age**: Is our workforce composition young or aging?
- **Marital Status**:What is the distribution of marital status in the workforce?

Retrenchment and Promotion Analysis

- **Fair Retrenchment:** Develop, transparent layoff criteria.
- **Effective Promotions:** Establish equitable advancement policies.
- **Workforce Stability:** Balance retention and career growth opportunities.

Attrition Analysis

- **Attrition Drivers**: Analyze reasons behind employee turnover.
- **Salary & Service Impact**: Do salary and services provided influence attrition?

Solution Approach: Data Visualization Dashboards

Workforce Demographics

Visualizations for gender, age, marital status, salary, and tenure distribution.

Promotions and Layoffs

Tracking promotion, retrenchment rates, job roles, departments, gender, age, and tenure distributions.


Attrition Analysis

Analyzing attrition trends, key factors, and correlations with salary, tenure, commute distance, and satisfaction.
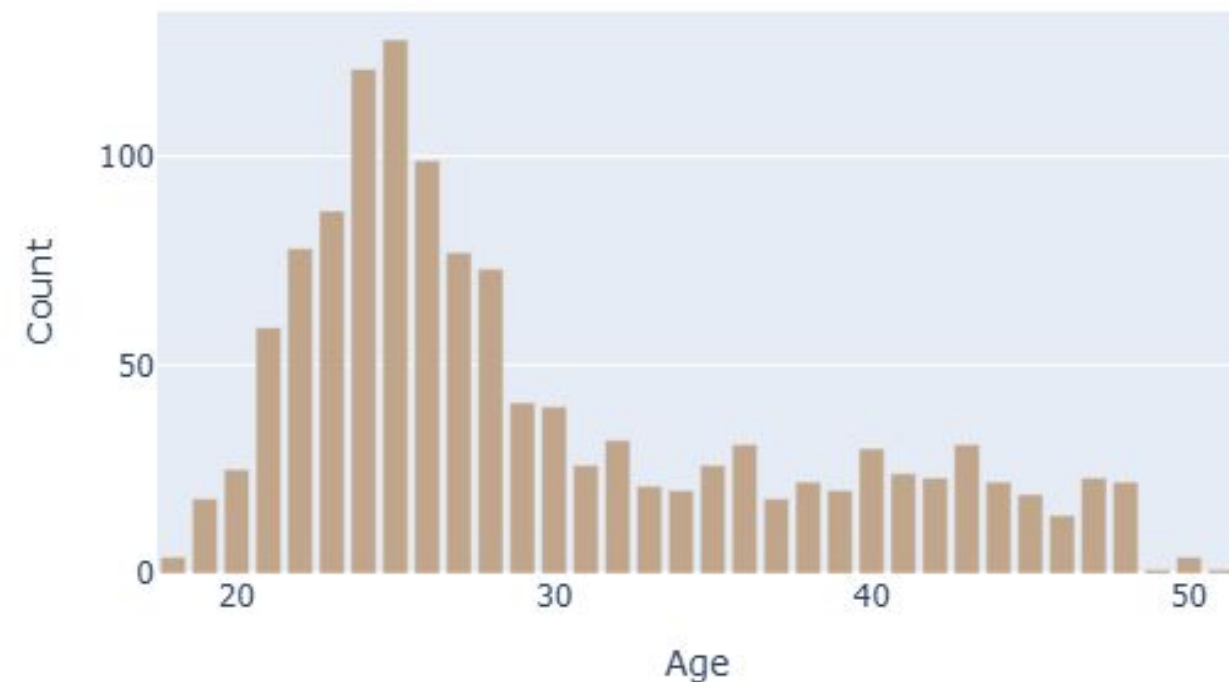
Demographics Overview: A Deep Dive

Analyzed the distribution of the following demographic attributes in the workforce population to identify trends:

- ❖ Age
- ❖ Gender
- ❖ Marital Status
- ❖ Salary
- ❖ Tenure

Employee Distribution by Gender

- Female
- Male
- Non-Binary
- Prefer Not To Say

43.8%   46.5%   8.52%   1.17%
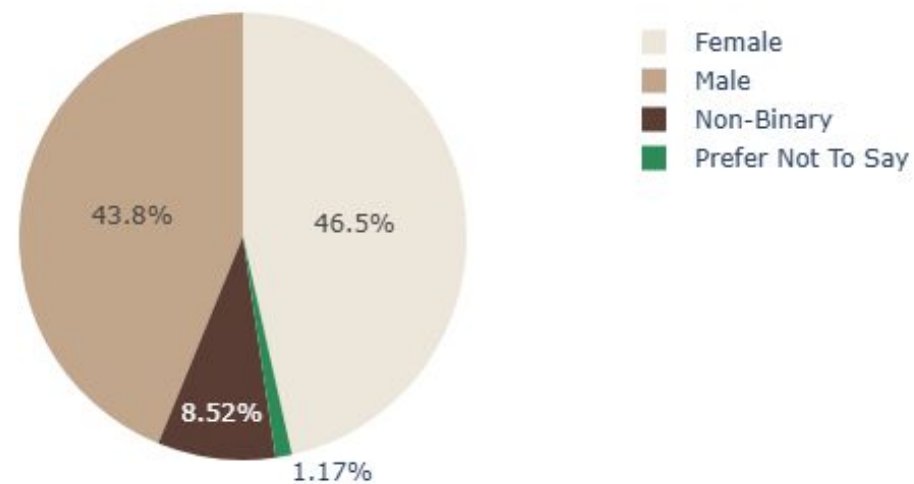
Employee Distribution by Age

💡 **Some Observations**

- Gender: Roughly equal distribution between male and female employees.
- Age: Most of the employees fall in the 21-28 range.

Layoffs & Promotions Overview

- Determine the promotion and retrenchment rates based on the company's criteria.

- Evaluate whether the promotion targets are being met and if retrenchment levels remain within acceptable thresholds.

Retrenchment Rate: 4.99%
Retrenchment Threshold: 7%

Promotion Rate: 9.49%
Promotion Target: 6%

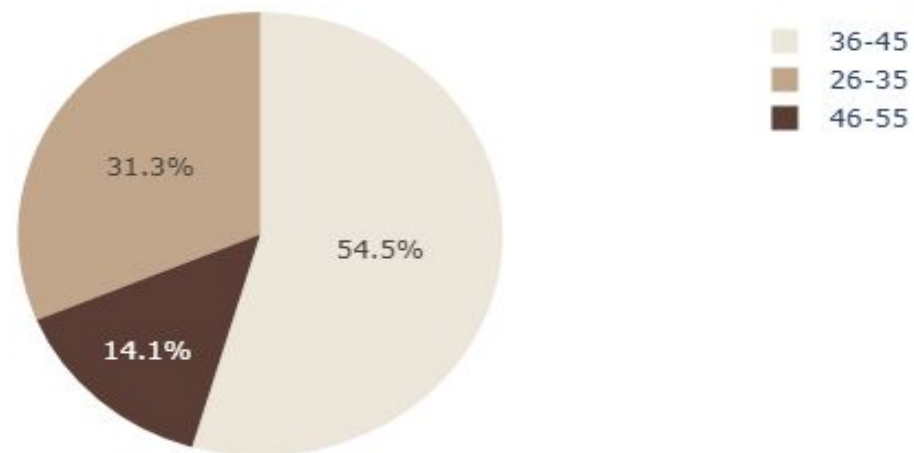| Data Item	Requirements
Promotion Rate	Years since last promotion => 8,
>=3.5	Average Manager Rating >=3.5
Retrenchment Rate	Years since last promotion => 4,
< 3	Average Manager Rating < 3
Attrition Rate	Number of employees who resigned
	Total Number of employees

Layoffs & Promotions Overview
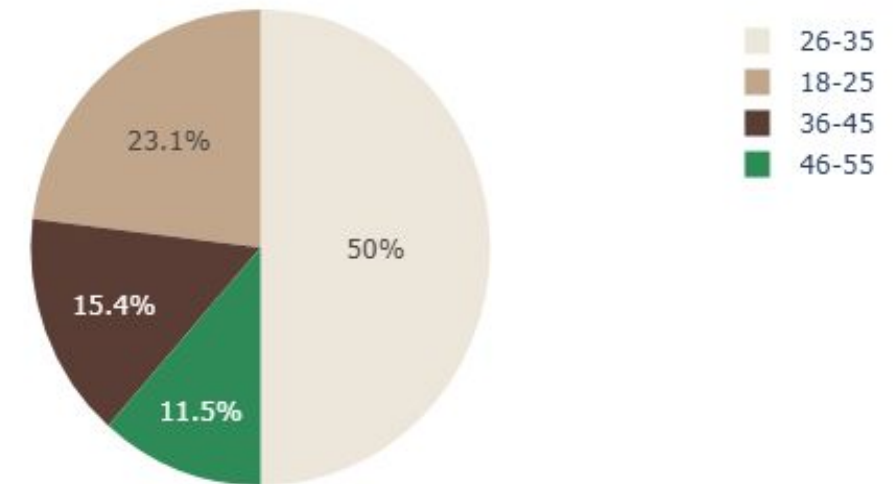
Analyze the distribution of promotions and layoffs across:

❖ Tenure
❖ Age
❖ Gender
❖ Department
❖ Job Role

to uncover trends and ensure alignment with company policies and diversity objectives.

Employee Distribution by Age Bracket: Layoffs

- 26-35
- 18-25
- 36-45
- 46-55

50%
23.1%
15.4%
11.5%

Employee Distribution by Age Bracket: Promotions

- 36-45
- 26-35
- 46-55

54.5%
31.3%
14.1%

💡 **Some Observations**

● Promotions are concentrated in ages 36-45, while layoffs predominantly affect ages 25-35.
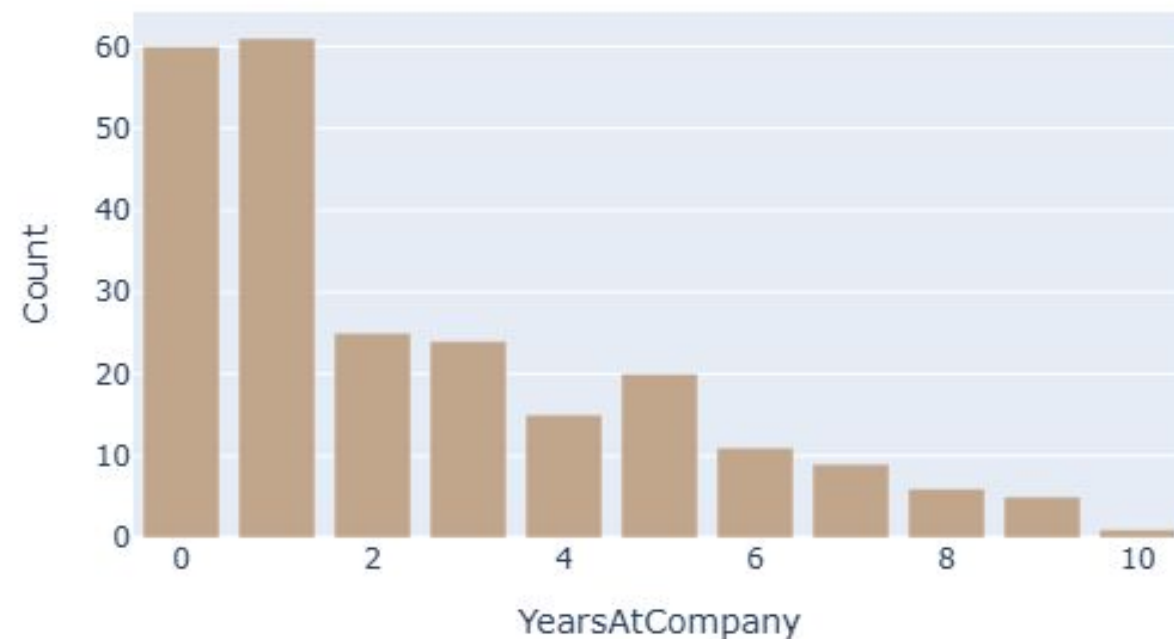
Attrition Analysis: Driving Factors

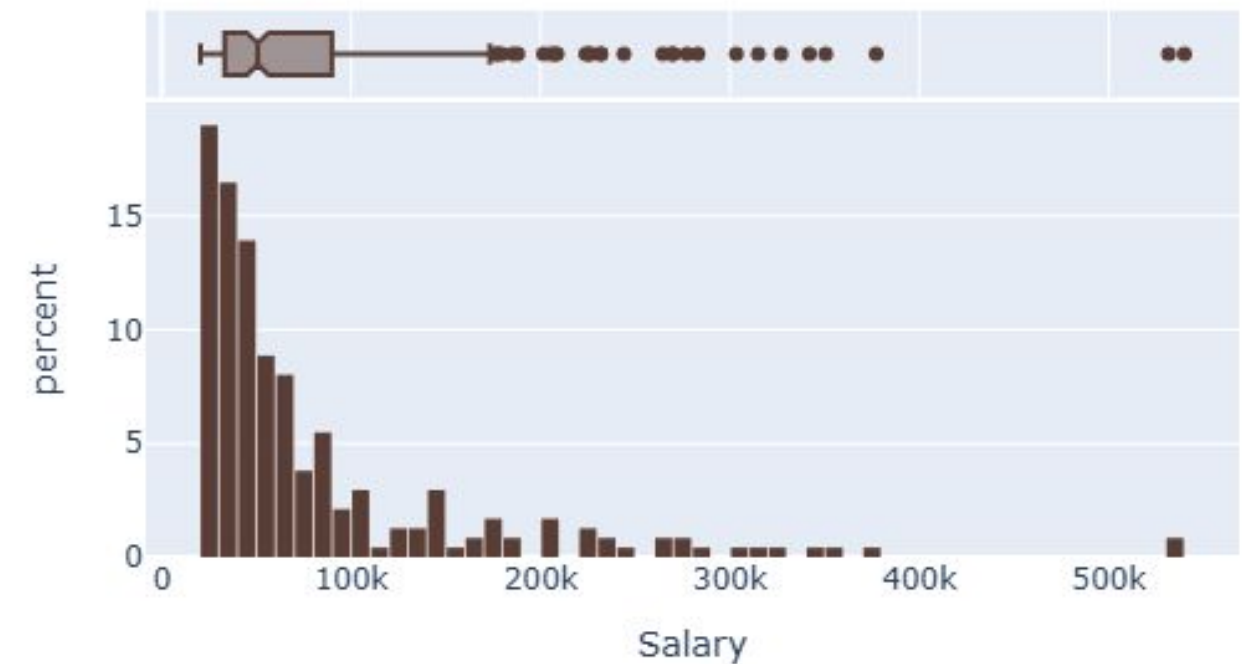Calculated attrition rate and explored factors driving turnover.

The most significant ones were :

- ❖ Tenure
- ❖ Age
- ❖ Overtime

- ❖ Salary
- ❖ Education
- ❖ Job Role

- ❖ Distance from Home
- ❖ Job Satisfaction
- ❖ Stock Option Level

Attrition by Tenure

Attrition by Salary

💡 **Some Observations**

- Tenure: Highest attrition at 0-1 years.
- Salary: Lower-paid employees have higher attrition.

🔑 Key Takeaways

Workforce Demographics

- Equal gender distribution across the company.

- Most employees are aged 21-28.

- 44,1% of employees are married.

- A significant portion of employees have been with the company for 6-10 years.

Retrenchment & Promotions

- Promotion Rate: 9,49%. Exceeds Target Rate of 6%

- Retrenchment Rate: 4,99%. Below threshold of 7%

Majority of Layoffs:
- Aged 25-35
- Male
- 6-10 years tenure

Majority of Promotions:
- Aged 36-45
- Female
- 6-15 years tenure

Attrition Analysis

- Attrition Rate 18.52%.

- Higher for men than women.

Factors that influence attrition:

- Tenure

- Age

- Salary

- Education

- Overtime

- Job Role

- Distance from Home

- Stock Options

Implementing our Findings

1   **Refine Workforce Strategies**

Leverage insights from the workforce demographics dashboard to align hiring efforts with diversity, inclusion, and equity goals while addressing skill gaps.

2   **Monitor Promotion and Layoff Trends**

Establish regular reviews of promotion and layoff metrics to ensure fair practices and to track progress toward departmental and organizational goals.

3   **Strengthen Retention Initiatives**

Use attrition analysis insights to develop targeted retention strategies, including tailored employee engagement programs and competitive benefits for at-risk employee groups.

4   **Data-Driven Decision Making**

Embed dashboards into HR's operational workflows to facilitate ongoing, data-driven evaluations of workforce health and adapt strategies as business needs evolve.

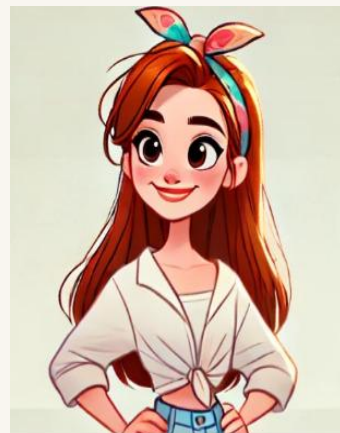# Thank you for your attention!

We're excited to share this project and welcome any feedback as we continue to learn and grow.

Let's stay connected! Scan the QR codes to find us on LinkedIn.

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