

Report

Company Performance Analysis

1. Overview

The company performance analysis was conducted using a dataset of 200 employee records. The dataset includes features such as name, age, gender, projects completed, productivity (%), satisfaction rate, feedback score, department, position, joining date, salary, and derived experience. The main objective of this analysis was to explore patterns and generate insights regarding employee demographics, departmental performance, salary distribution, and work behaviour.

2. Data Preparation & Cleaning

- The dataset was found to be **null-free** and properly typed.
- The '**Joining Date**' was converted to datetime format, and a new column '**Experience**' was derived.
- An '**Age Group**' feature was created to better visualize age-based trends.
- Exploratory Data Analysis (EDA) was conducted using `pandas`, `matplotlib`, and `seaborn`.

3. Key Demographic Insights

- The **dominant age group** was **25–30 years**, as seen in the age group pie chart.
- **Gender representation** was relatively balanced across departments and positions, though some disparities were observed.
 - The '**Analyst**' and '**Manager**' roles showed the most noticeable gender disparity.
 - **Sales department** had near-equal male and female representation, while **Finance, HR, IT, and Marketing** showed varied imbalances.

4. Productivity & Performance

- **Projects Completed:**
 - Most employees completed **between 5 and 17 projects**, indicating a fairly balanced workload.
- **Productivity (%):**
 - Majority of employees showed **moderate productivity**, highlighting potential areas for process improvement or training.

5. Salary Analysis

- **Average Salary by Position:**
 - **Managers** earned the highest average salary (~110,000), followed by **Team Leads** and **Senior Developers**.
 - **Interns** earned the least (~34,000), as expected.

- **Department-Wise Salary:**
 - **Marketing** department had the **lowest salaries** overall.
 - **HR** department also had salaries below the company average.
- **Salary Distribution:**
 - A substantial number of employees fell in the **lowest salary bracket**, with a smaller group in the **highest bracket**.

6. Experience & Tenure Insights

- Employees with **more experience** were generally found in the **IT and Finance departments**.
- **Employee joining trends** show a **significant increase from 2018 to 2022**, indicating company growth during that period.
- However, **long-tenured employees are relatively few**, suggesting challenges with **long-term employee retention**.

7. Correlation Observations

- **Age vs. Projects Completed:**
 - A direct correlation exists—older employees tend to have completed more projects.
- **Experience vs. Salary:**
 - A line plot revealed that while **experience is high in IT and Finance**, this does not always translate to the **highest salaries**, especially in **Marketing and HR**.

8. Summary of Observations

- **Workforce Age:** Most employees are in their late 20s to early 30s.
- **Salary Gaps:** Clear differences in salary based on position and department, with **Marketing and HR receiving lower compensation**.
- **Departmental Experience:** IT and Finance lead in terms of employee experience.
- **Gender Distribution:** Reasonably balanced overall, with exceptions in specific roles.
- **Tenure Challenges:** Company attracts new employees but struggles with long-term retention.
- **Performance:** Productivity levels are moderate, suggesting improvement areas in employee engagement and training.

9. Recommendations

- Conduct a deeper investigation into **departments with lower salaries** to address employee satisfaction and retention.
- Design targeted **training programs** to boost productivity among moderately performing employees.
- Improve **gender equity** in positions with noticeable disparity.
- Analyse **turnover reasons** to convert short-term stays into long-term commitments.