

# **INTRODUCTION**

## **BACKGROUND:**

We have data of IBM Company , Which is consist of 1470 rows and 33 columns. In which age of employee, daily hour, monthly hour , salary ,salary hike and attrition, gender , married status is given. It is basically consist of current status of IBM Company . Before visualization we analyse the data properly the drive the insights from data which will help us to find out what are steps we should take to minimize the attrition rate.

## **PROBLEM :**

The IBM Company has been experiencing the attrition issue in there company, which is impacting there value in the market and company also losing its performance, to address this issue, it is very essential know the reasons behind attrition and find out insights to stop attrition and improve the satisfaction of employees.

## **SOLUTION**

Through comprehensive data analysis, this report offers data-driven insights into IBM HR analysis of employees attrition and performance . By engaging stakeholders with these insights, the company can develop targeted strategies to address and improve performance of employees.

- **Data Analysis:** Evaluate customer demographics, location, services, and current status to identify patterns related to churn. Key areas include customer acquisition, gender, age group, city distribution, internet service usage, revenue, data consumption, and streaming service preferences.
- **Data-Driven Insights:** Extract actionable insights on churn drivers, customer profiles (churned, joined, stayed), preferred payment methods, and effective churn offers from the analysis. These insights guide strategic decisions and retention strategies.
- **Stakeholder Engagement:** Engage stakeholders—management, marketing teams, and customer service—by presenting clear data insights. This facilitates collaboration, ensuring alignment on objectives and effective implementation of churn reduction strategies.

## PROJECT SCOPE

**Goal:** Reduce employee attrition for better performance of IBM company through data analysis and data driven insights.

### Step-by-Step Process:

#### 1. Data Collection and Preparation

- Data collected from Kaggle website
- Ensure data completeness and accuracy for analysis.

#### 2. Data Analysis

- Analyze employees age, job satisfaction, education field, department, marital status, overtime etc.

- Derive insights on attrition drivers and employee profiles (yes, No).

### **3. Stakeholder Engagement**

- Identify stakeholders: management, HR team, Employee staff.
- Present insights clearly to align Attrition rate and performance of employees .

### **4. Strategy Development**

- Develop targeted strategies based on insights.
- Focus on job satisfaction of employees.

### **5. Implementation and Monitoring**

- Implement strategies to reduce attrition rate by providing them friendly environment and increasing salary hike.

### **Evaluation and Reporting**

- Evaluate impact on reduction in attrition rate and satisfaction of staff members.
- Prepare detailed report on findings, actions, and outcomes.
- Highlight stakeholder roles in addressing attrition and performance.

### **Stakeholders:**

1. **Management:** Decision-makers for resource allocation.
2. **HR Teams:** Reduce attrition rate and improve performance
3. **Manager and staff of IBM**

4. **Data Analysis Team** : Study data and derive meaningful insights for better performance of employees and reduce attrition rate of employee

## METHODOLOGY

### Data Sources:

- Obtained data from Kaggle in CSV format.
- Imported data into Excel for analysis.

### Data Wrangling:

- Addressed apparent null values caused by customers not using certain services (e.g., no internet = no streaming).
- Replaced these "null" instances with which fits better to accurately reflect the data's nature.

### Data Analysis:

- Utilized Excel for comprehensive analysis of churn data.
- Explored employee attrition, marital status job Satisfaction, Marital status, education field and other variables to uncover insights Employees attrition and performance.

### Finding Trends and Patterns:

- Conducted in-depth examination of employee attrition data to identify significant trends and patterns.
- Aimed to discover recurring themes and anomalies that inform effective churn reduction strategies.

### Data Visualization:

- Leveraged Excel's charting and graphing tools to visually present insights of employee attrition and performance analysis.
- Created charts, graphs, and pivot tables to make complex information clear and actionable for stakeholders.

## GOALS AND KPI'S

### Goals:

1. Insure Data Accuracy
2. Understand Customers Need
3. Identify attrition drive
4. Monitor Attrition Rate
5. Improve Customer Satisfaction
6. Develop Retention Strategies

### KPIs :

- 1.Data Quality Score.
2. New Employee Acquisition Rate.
3. Attrition Rate
- 4.Retension Rate
- 5.Average performance of Company
6. Employee job satisfaction

# TECHNICAL PROCESSES

- Pivot Tables
- Imputation
- Power Query
- Data Visualization

## BUSINESS CONCEPTS USED

- **Attrition Rate:** Percentage of employees leaving.
- **Turnover Rate:** Rate of employee replacements.
- **Employee Tenure:** Average stay duration of employees.
- **Exit Interviews:** Data from departing employees on why they left.
- **Retention Rate:** Percentage of employees staying.
- **Employee Engagement:** Measure of employee motivation and commitment.
- **Reasons for Leaving:** Categorized departure reasons (e.g., salary, career growth).
- **Voluntary vs. Involuntary Attrition:** Leaving by choice vs. layoffs/terminations.
- **Predictive Analytics:** Predicting who might leave to prevent it.
- **Cost of Attrition:** Financial impact of employees leaving.

# RECOMMENDED ANALYSIS

**Is Company loosing high value Employee? If so, then what are the reasons behind Attrition?**

- Total employee Count in the IBM is 1470 and out of this 237 employee faced attrition. It means 16.14% Attrition Rate is there, So yes we loosing high value employees.
- We get form Analysis that research and management department's Employee faced attrition, So we can retain them by increasing there salary hike or by appreciating them for there good work.
- We must know there job satisfaction need And Is there difficulty they faced while working in office environment . This factors may help to know the reason behind the attrition.

## CONCLUSION

We want to conclude that, the attrition rate IBM is 16.14%. The attrition is high in Research and development department. After analyzation we can say that, attrition rate is high when employee is Single it means juniors faced more attrition. Most of the employee have high over time which is also reason of attrition. Job satisfaction and working environment is one the reason .

**Project owners name:-**

Sejal Nandanwar(CS22005)

Priya Mankar(CS22011)

ShwetaRewatkar(CS22032)

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