Employee Attrition Analysis

Presented by: Ramy Gendy

The problem: Employee Attrition

Purpose	Context	Structure

Save Attrition Costs:
● Decease of overall performance.
● Difficulty in managing ranks.
● Increase costs(trainings, hiring process).
● Loss of employee development plan.
	● Factors affect attrition and how it is related to our company.
	● Factors:
	  ○ Management.
	  ○ Compensation.
	  ○ Career growth.
	  ○ workloads.
		● Understand trends and patterns behind employee loss.
		
		● Make data driven recommendation to prepare for future employee loss.

Data Analysis steps

ETL(Extract, Transform & Load)

- Extract: Data from xlsx sheet file.
- Transform:
- Cleaning: Remove redundant data.
- Transform Data types.
- Update features.
- Load: Data to Power BI.

Data Modeling

- Understand Data
- Data Modeling Using Star Schema

Data Analysis

- Correlations
- Causal Connections
- Trends
- Patterns
- Outliers
- Developing Conclusion & Recommendation

Our Data Facts

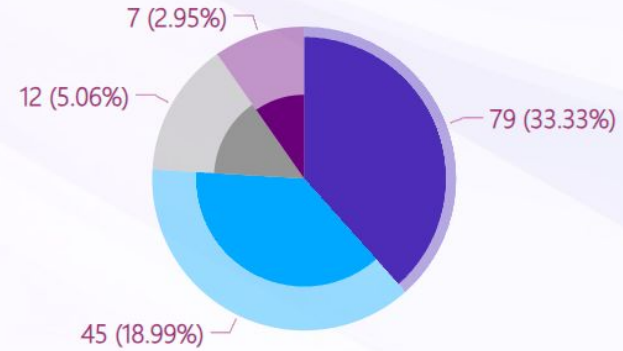| 16%	237	1233	1470
Attrition Rate	Total Attrition	Total Retention	Total Employees

16% attrition rate of our High Performance Employee (Rank 3 and 4)

Data Analysis

Patten:

- Job level 1 positions with Age factor contributes to attrition directly with 79 employees in their 20's has left.

Data Analysis

Correlations:

- Employees with **monthly income** less than 2800 in *HR department*.

- Employees with 5000 salaries in *Research department* who spent **Less than 10 years at company** as they are more likely to leave than higher Salaries in same year range.
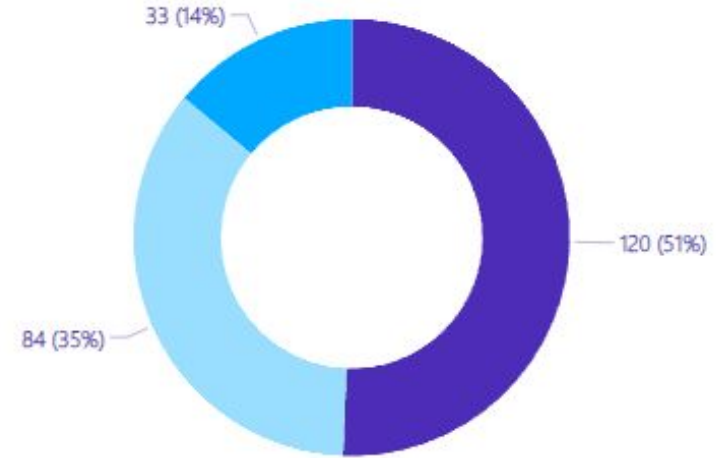
Data Analysis

MaritalStatus
- Single
- Married
- Divorced

33 (14%)
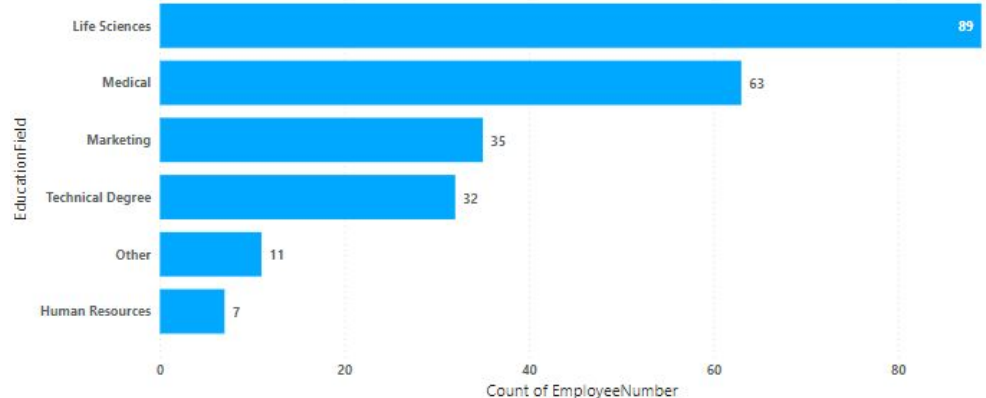120 (51%)
84 (35%)
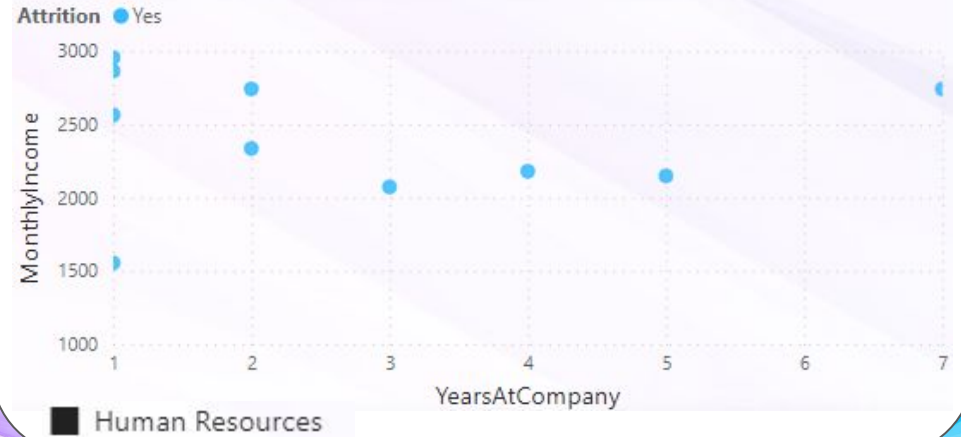
Correlations:

- *Single employees* and *bachelor's degrees* employees as has their attrition total count is highest among their category with 99 & 120 respectively.

Attrition ● Yes

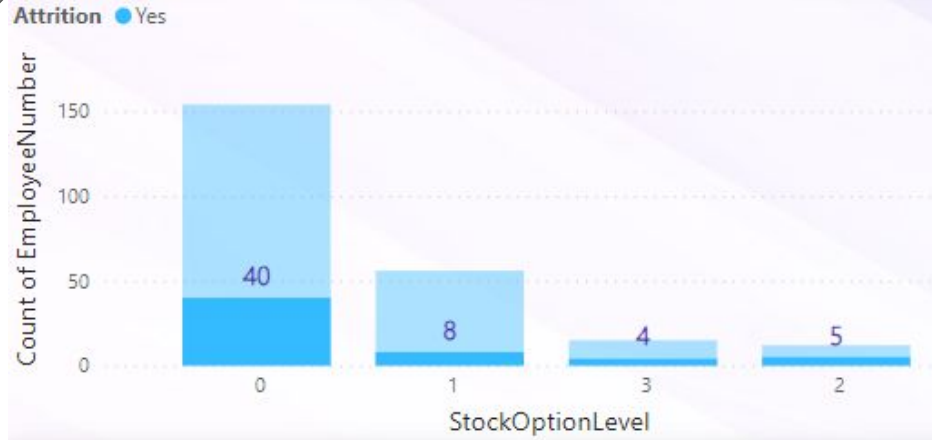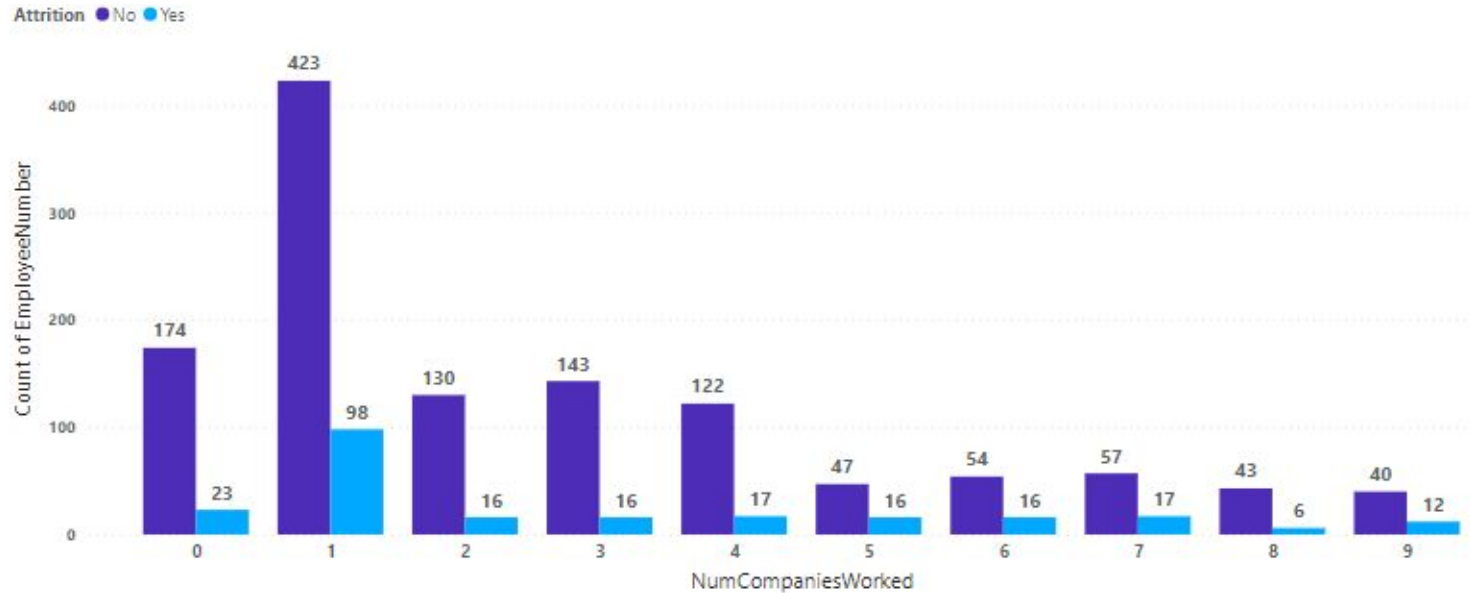| EducationField	Count
Life Sciences	89
Medical	63
Marketing	35
Technical Degree	32
Other	11
Human Resources	7

Count of EmployeeNumber

Data Analysis

- **Stock option level**, **level zero has highest over turn** with 154 employer where 40 of them are *Sales Executives*.

Data Analysis

Correlations:

Employees who **worked** in Less than two companies have a total attrition of 121.

Recommendations

- It is recommended to hire higher age for **Job level 1** positions.

- It is recommended to re-adjust **monthly income** less than 2800 for employers in *HR department* and 5000 for employees in *Research department* who spent **Less than 10 years at company** .

- Beside allow more **stock option level**, for **level zero for** *Sales Executives*.

- Recommended hiring employees with **number of companies worked** more than one.

- Also carefully consider *singles* and *bachelor's degrees* employees.

- Further data and analysis is needed to investigate the high attrition for work life balance of better and work involvement of high.

& Future Work

Q & A

Thank You!