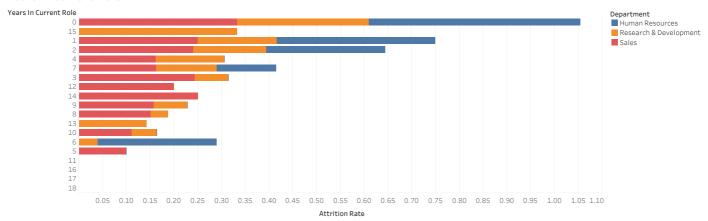
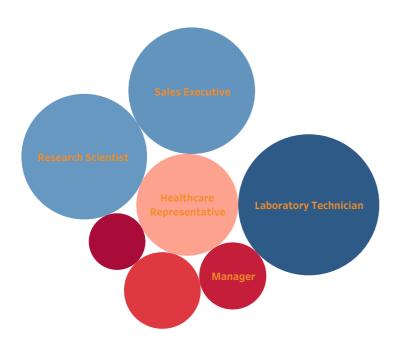
#### Years in Current Role



Attrition Rate for each Years In Current Role. Color shows details about Department.

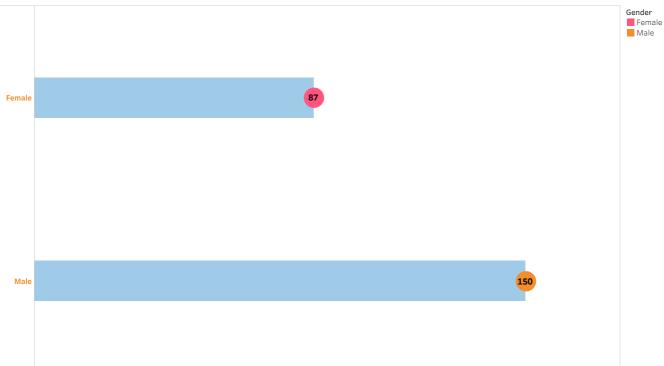
#### **Bubble Chart by Job Role**

# Attrition Rate 0.0303 0.1882



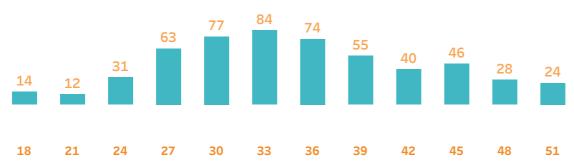
Job Role. Color shows Attrition Rate. Size shows Attrition Rate. The marks are labeled by Job Role. The data is filtered on Action (Age (bin)), Action (Department, Education Field), Action (Gender), Action (Job Role, Job Satisfaction) and Action (Years In Current Role). The Action (Age (bin)) filter keeps 15 members. The Action (Department, Education Field) filter keeps 14 members. The Action (Gender) filter keeps 1 member. The Action (Job Role, Job Satisfaction) filter keeps 36 members. The Action (Years In Current Role) filter keeps 19 members. The view is filtered on Attrition Rate, which ranges from 0.0250 to 0.3060.

#### **Attrition By Gender**



Sum of Attrition Count and sum of Attrition Count for each Gender. For pane Sum of Attrition Count (2): Color shows details about Gender. The marks are labeled by Gender and sum of Attrition Count. The data is filtered on Action (Job Role), Action (Age (bin)), Action (Department, Education Field), Action (Job Role, Job Satisfaction) and Action (Years In Current Role). The Action (Job Role, Job Satisfaction) filter keeps 9 members. The Action (Age (bin)) filter keeps 15 members. The Action (Department, Education Field) filter keeps 14 members. The Action (Job Role, Job Satisfaction) filter keeps 36 members. The Action (Years In Current Role) filter keeps 19 members.

2.000

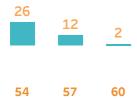


Sum of Employee Count for each Age (bin). Color shows Bin Size (Parameters). The marks are labeled by sum of Employee Count. The data is filtered on Education, Action (Job Role), Action (Department, Education Field), Action (Gender), Action (Job Role, Job Satisfaction) and Action (Years In Current Role). The Education filter ranges from 1 to 5. The Action (Job Role) filter keeps 9 members. The Action (Department, Education Field) filter keeps 14 members. The Action (Gender) filter keeps 1 member. The Action (Job Role, Job Satisfaction) filter keeps 36 members. The Action (Years In Current Role) filter keeps 19 members.

### Number of Employee by Age Group

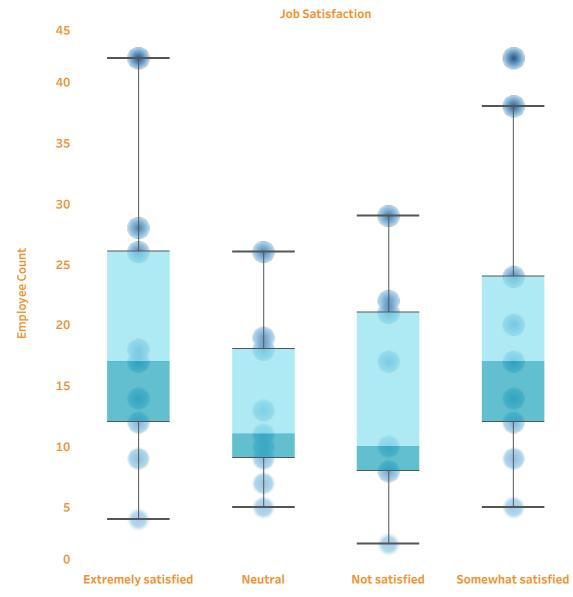
**Bin Size** 

2.000



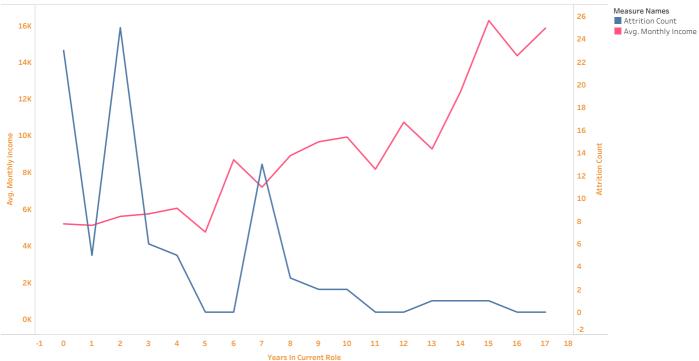
Sum of Employee Count for each Age (bin). Color shows Bin Size (Parameters). The marks are labeled by sum of Employee Count. The data is filtered on Education, Action (Job Role), Action (Department, Education Field), Action (Gender), Action (Job Role, Job Satisfaction) and Action (Years In Current Role). The Education filter ranges from 1 to 5. The Action (Job Role) filter keeps 9 members. The Action (Department, Education Field) filter keeps 14 members. The Action (Gender) filter keeps 1 member. The Action (Job Role, Job Satisfaction) filter keeps 36 members. The Action (Years In Current Role) filter keeps 19 members.

### **Employee count vs Job Satisfaction**



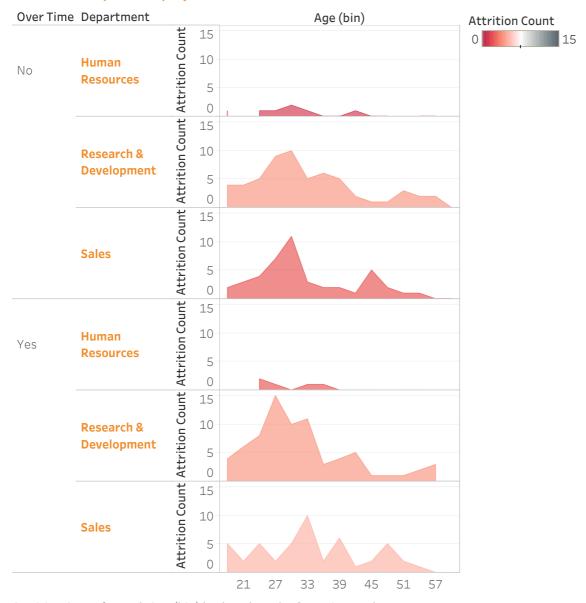
Sum of Employee Count for each Job Satisfaction. Color shows sum of Employee Count. The marks are labeled by sum of Employee Count. Details are shown for Job Role. The data is filtered on Education, Action (Job Role), Action (Age (bin)), Action (Department, Education Field), Action (Gender) and Action (Years In Current Role). The Education filter ranges from 1 to 5. The Action (Job Role) filter keeps 9 members. The Action (Age (bin)) filter keeps 15 members. The Action (Department, Education Field) filter keeps 14 members. The Action (Gender) filter keeps 1 member. The Action (Years In Current Role) filter keeps 19 members.

#### **Employees Attrition by Income**



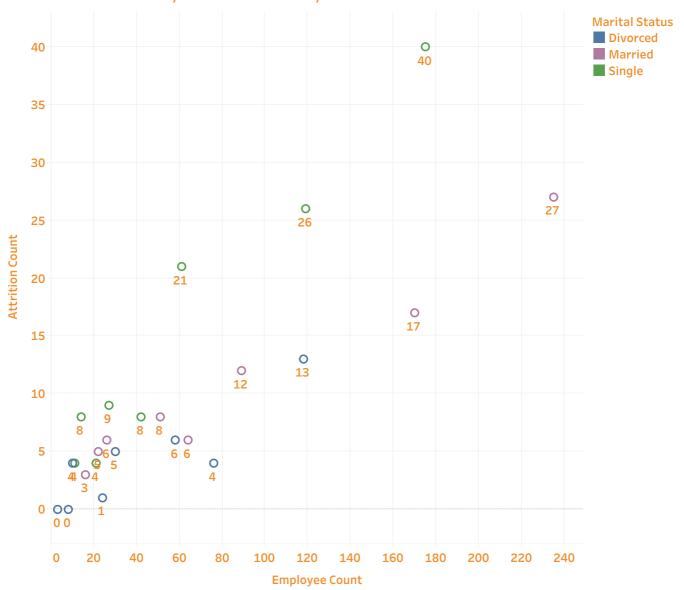
The trends of Avg. Monthly Income and Attrition Count for Years In Current Role. Color shows details about Avg. Monthly Income and Attrition Count. The data is filtered on Action (Job Role), Action (Age (bin)), Action (Department, Education Field), Action (Gender) and Action (Job Role, Job Satisfaction). The Action (Job Role) filter keeps 9 members. The Action (Age (bin)) filter keeps 15 members. The Action (Department, Education Field) filter keeps 14 members. The Action (Gender) filter keeps 1 member. The Action (Job Role, Job Satisfaction) filter keeps 36 members. The view is filtered on sum of Attrition Count, which ranges from 0 to 51 and keeps Null values.

#### Attrition Graph of Employees based on Overtime



Attrition Count for each Age (bin) broken down by Over Time and Department. Color shows Attrition Count. Details are shown for Attrition Count.

# Work Life Balance/Marital Status/Gender



Sum of Employee Count vs. sum of Attrition Count. Color shows details about Marital Status. Details are shown for Work Life Balance and Gender.

#### **Educational Field**

**Education Field** 

Job Level

1 326

Department	Human Resources	Life Sciences	Marketing	Medical	Other	Technical Degree
<b>Human Resources</b>	21	19		2		1
Research & Devel		326		317	51	82
Salos		1/17	167	74	8	30

Sum of Job Level broken down by Education Field vs. Department. Color shows sum of Job Level. The marks are labeled by sum of Job Level. The data is filtered on Action (Job Role), Action (Age (bin)), Action (Gender), Action (Job Role, Job Satisfaction) and Action (Years In Current Role). The Action (Job Role) filter keeps 9 members. The Action (Age (bin)) filter keeps 15 members. The Action (Gender) filter keeps 1 member. The Action (Job Role, Job Satisfaction) filter keeps 36 members. The Action (Years In Current Role) filter keeps 19 members. The view is filtered on Education Field, which keeps 6 of 6 members.

#### **KPI-HR DATA ANALYTICS**

Employee Count Attrition Count Attrition Rate

588 87.0 14.

Employee Count, Attrition Count, Attrition Rate, Active Employees and Avg. Age. The data is filtered on Action (Job Role), Action (Age (bin)), Action (Department, Education Field), Action (Gender), Action (Job Role, Job Satisfaction) and Action (Years In Current Role). The Action (Job Role) filter keeps 9 members. The Action (Age (bin)) filter keeps 15 members. The Action (Department, Education Field) filter keeps 14 members. The Action (Gender) filter keeps 1 member. The Action (Job Role, Job Satisfaction) filter keeps 36 members. The Action (Years In Current Role) filter keeps 19 members.

#### **KPI-HR DATA ANALYTICS**

n Rate Active Employees Avg. Age

.80% 501.0 37.3

Employee Count, Attrition Count, Attrition Rate, Active Employees and Avg. Age. The data is filtered on Action (Job Role), Action (Age (bin)), Action (Department, Education Field), Action (Gender), Action (Job Role, Job Satisfaction) and Action (Years In Current Role). The Action (Job Role) filter keeps 9 members. The Action (Age (bin)) filter keeps 15 members. The Action (Department, Education Field) filter keeps 14 members. The Action (Gender) filter keeps 1 member. The Action (Job Role, Job Satisfaction) filter keeps 36 members. The Action (Years In Current Role) filter keeps 19 members.



IntroductionNumber of employees by ag..Attrition by Job RoleEmployee count vs Job Satisfacti..Attrition based on OvertimeYears in Current RoleEducation Role

Each day, they are many people who begin their journey with a new job or leave the job for their personal circumstances. Our main focus and scope of the dataset is on workforce reduction in the company, which is a fictional dataset created by IBM data scientists to showcase or unveil the factors that lead to employee attrition.

Employee Attrition is determining the turnover rate (i.e., percentage of employees leaving the organization voluntarily, unvoluntarily, role deletion or internal). Quiting may happen due to various factors such as more working hours, no recognition, low payment, work distance from home, work environment, management, better prospects etc.

Our idea/motto of our project is to visualize the data and provide meaningful insights, find out whether she/he is going to quit or not, if they are leaving, what are the reasons behind it. Based on findings, we can provide suggestions on how to reduce the employee attrition such that long term strategies in the company won't get affected, apart from that, recruiting new employees, hiring, training them is way costlier than not terminating someone.

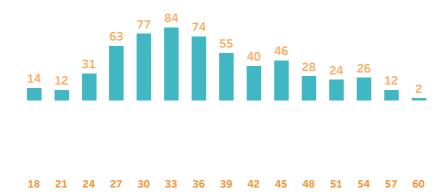
Our dataset has 35 attributes and 1470 employees with no missing information. Also, through high-level analysis, the dataset is unbalanced, as 84% of employees do not quit and 16% quit...

Introduction Number of employees by ag.. Attrition by Job Role Employee count vs Job Satisfacti.. Attrition based on Overtime Role Education al Field

Bin Size

2.000

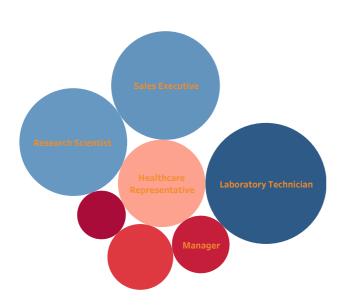
Bin Size

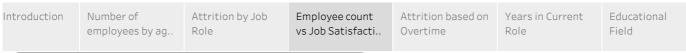


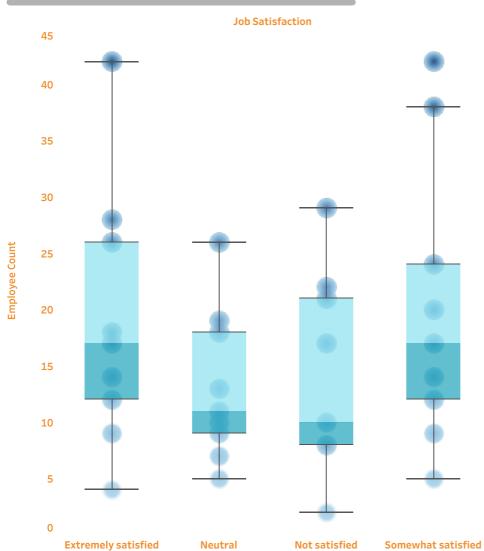
Introduction Number of employees by ag.. 
Number of employees by ag.. 
Attrition by Job vs Job Satisfacti.. 
Number of employees by ag.. 
Attrition based on vs Job Satisfacti.. 
Overtime 
Attrition based on Overtime 
Role 
Attrition based on al Field

Attrition Rate

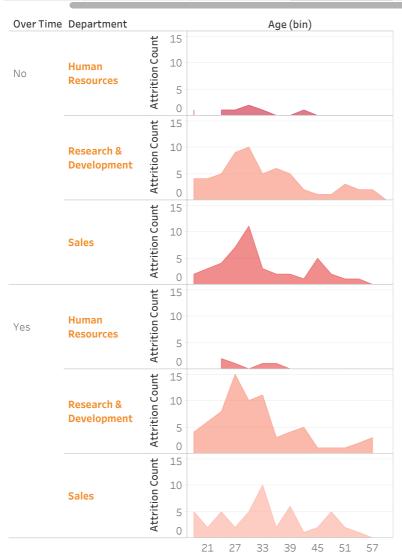
0.0303 0.1882



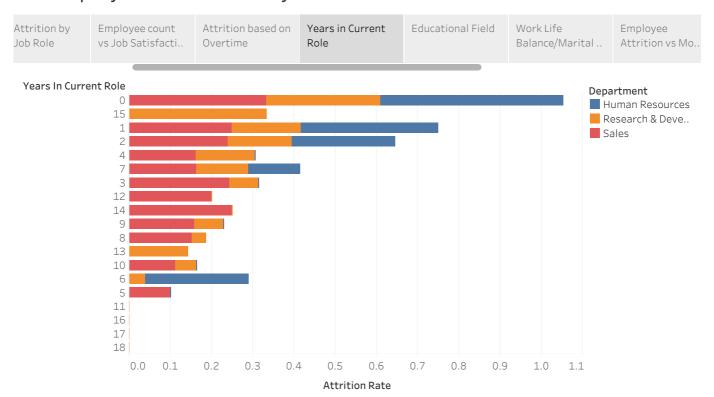




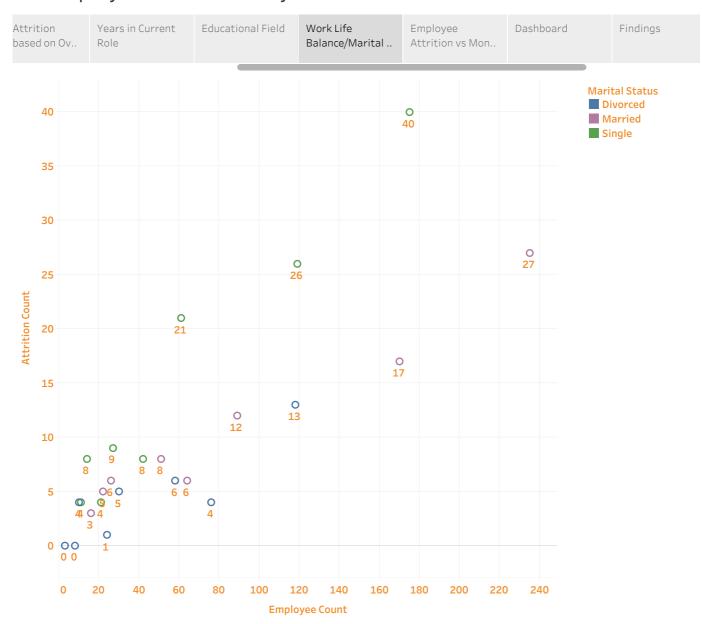
Number of employees b.. Attrition by Job Role Employee count vs Job Satisfacti.. Attrition based on Overtime Years in Current Role Educational Field Work Life Balance/Marit..







Employee Attrition based on Count vs Job Overtime		Years in Current Role			Educational Field		Work Life Employee Balance/Marital Attrition vs Mon		Dashboard		
Department		Human Resources	Life Sciences	Education Field  Technical  Marketing Medical Other Degree			Job Level				
Human Resou	rces	21	19		2		1				
Research & De	evel		326		317	51	82				
Sales			147	167	74	8	30				





Educational Work Life Employee Dashboard Findings Managerial Field Balance/Marital .. Attrition vs Mon..



Conclusion

Educationa Work Life Employee Dashboard Findings Managerial Conclusion

| Field Balance/Marital .. Attrition vs Mon.. | Findings | Managerial | Implications | Implications

Through our analysis/visualizations, we categorize the attrition as follows:

- **1. Age group**: Employees who worked for 5 to 8 years would like to switch for better income and higher position and most of them are around 27.
- 2. Gender: Female with lower salaries or satisfaction tend to leave quickly.
- **3. Work-life balance/marital status**: Attrition count for single, male seems to be high when compared with married and divorced.
- **4. Monthly income**: It is less likely to leave if the income is more. Apart from that, hikes also play prominent role.
- **5. Education**: Employees who did Bachelors has high chance to leave due to their further career progress in terms of studies or better job opportunities.
- **6. Department**: Research & Development shows high attrition count for age group between 27 and 29. Though, average income is high for sales, they tend to leave more.
- **7. Overtime**: most of the employees who worked overtime are seen to be left the organization. But it's 54% of employees are overtime which is almost balanced with who don't work overtime. This might not be the reason to leave the company.
- **8. Work Environment**: There is high chance of leaving for employees who have no recognitions, appreciations, more work pressure, manager behavior etc.

Educationa Work Life Employee Dashboard Findings Managerial Conclusion

| Field Balance/Marital .. Attrition vs Mon.. | Dashboard | Findings | Managerial | Conclusion | Implications | Conclusion | Con

# On evidence generated in findings and visualizations, we understood that they are few measures to take up for reducing employee attrition.

- 1. We recommend organizations to increase their budget on salaries with respect to the role, also, quarterly bonus, perks, hikes must be implemented which is a good way to reciprocate with employees.
- 2. Conducting quarterly appraisals and recognizing the best performer every month inculcates positivity and encouragement to work in employee.
- 3. If the employee leaves voluntarily, it's insisted to have a one on one session and knowing the reason is important because hiring a new employees impacts company profits and turnover rate.
- 4. Changing the hiring and onboarding process can impact the organization in a positive direction.
- 5. Instead of terminating a long term working employee for not having the skills, it's always better to create a room for advanced technology sessions, exams, assessments for purpose of individual career and project goals/requirements. Also..

Educationa Work Life Employee Dashboard Findings Managerial Conclusion

| Field Balance/Marital .. Attrition vs Mon.. | Dashboard Findings | Managerial | Conclusion | Conclus

Overall, firstly, hikes, perks and recognitions play vital role for an employee to either continue or quit the job.

Secondly, late 30s tend to either pursue higher education or switch the companies in order to earn well and settle rich.

Thirdly, toxic environment also leads to employee attrition. These are three main factors that impact company turnover rate and profits. It's not the overtime, moreover, employee thinks if she/he is underused. However, to reduce it, based on our research and analysis of dataset, we have mentioned few implementations in previous section.