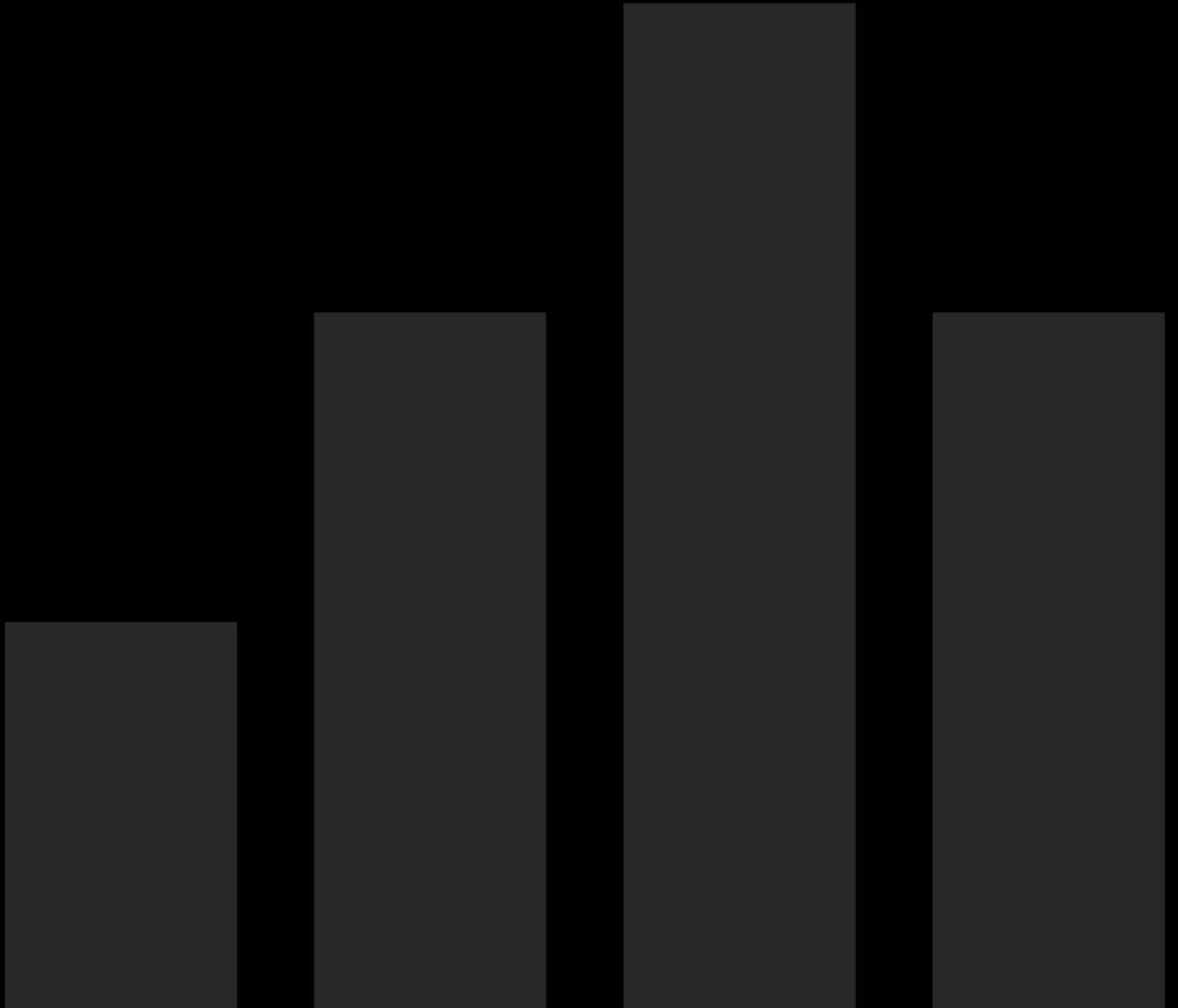
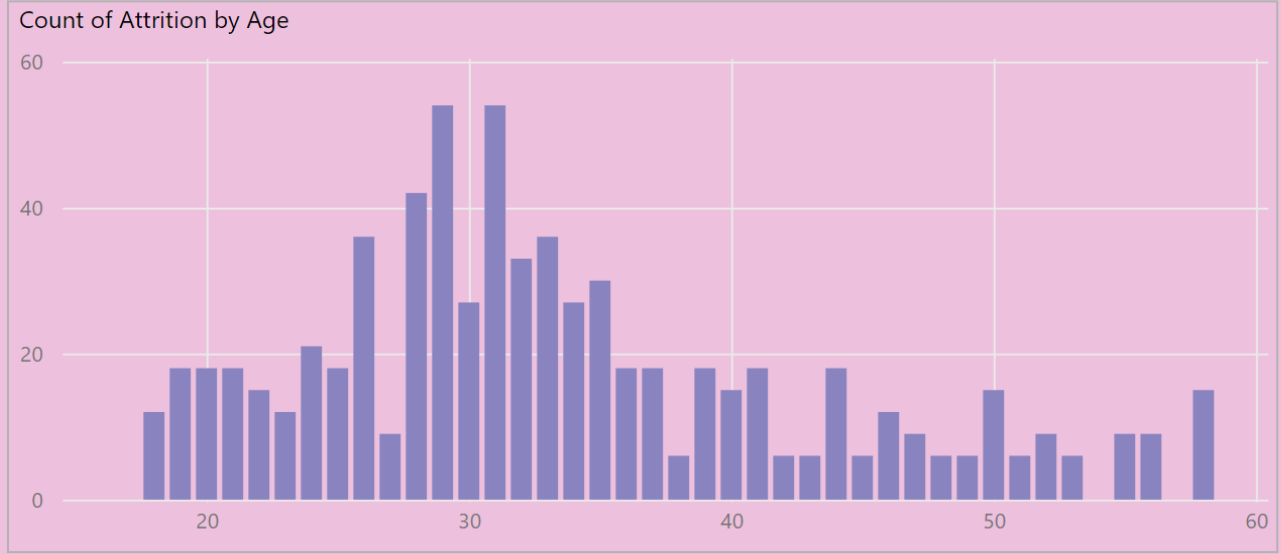
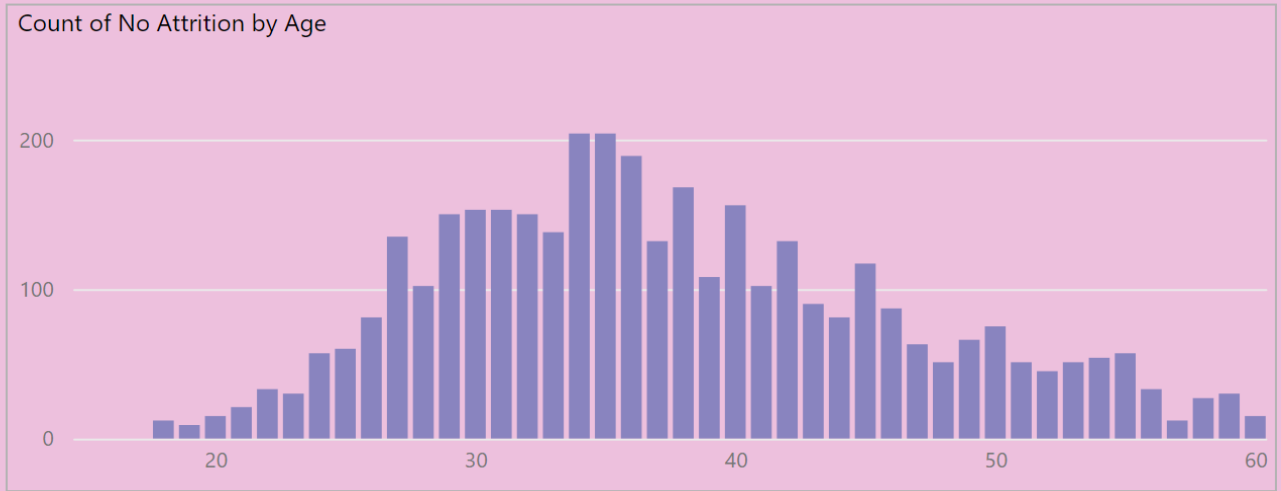
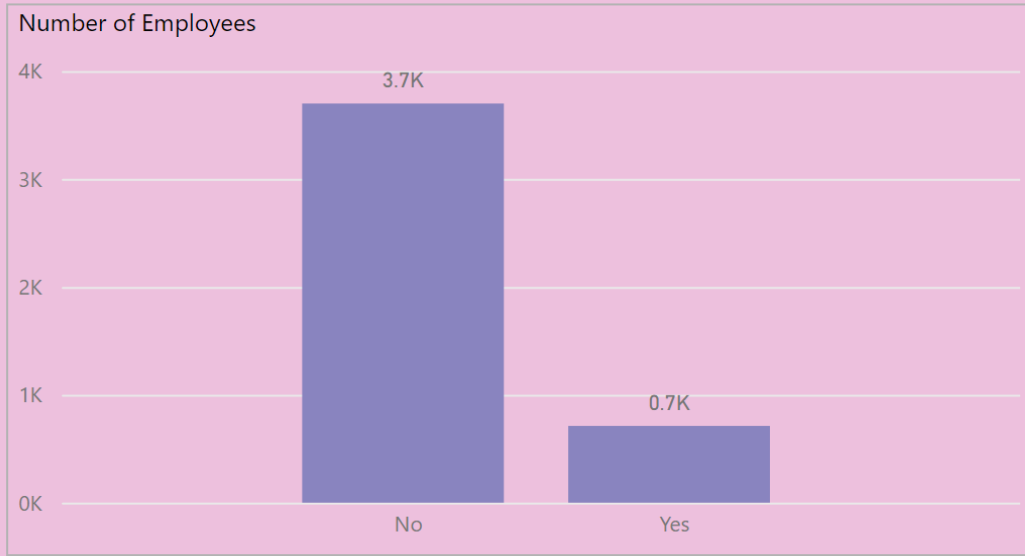


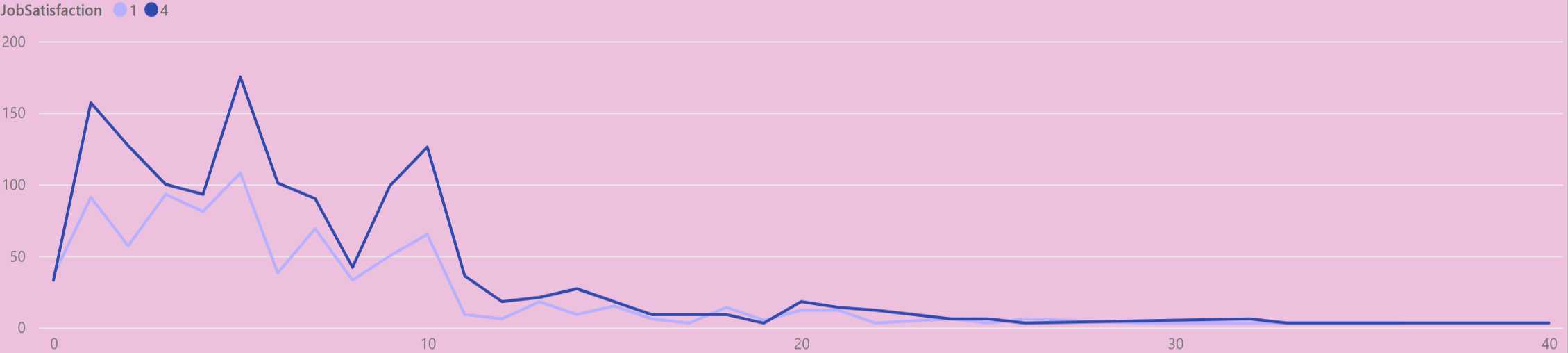
Employee Attrition

[View in Power BI](#) ↗

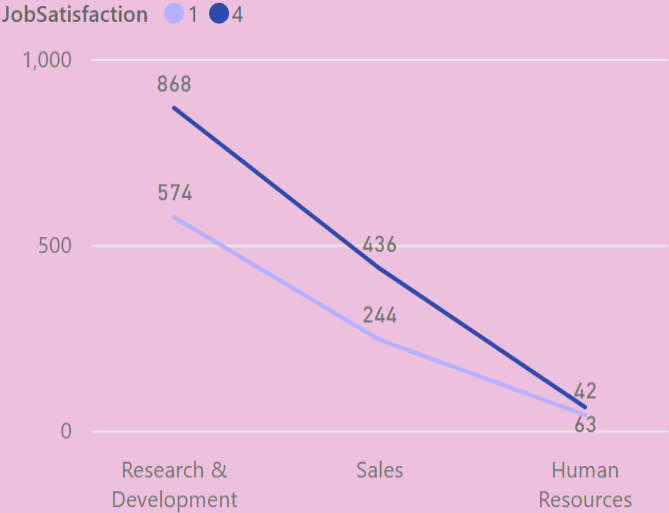




Count of JobSatisfaction by YearsAtCompany and JobSatisfaction



Count of JobSatisfaction by Department

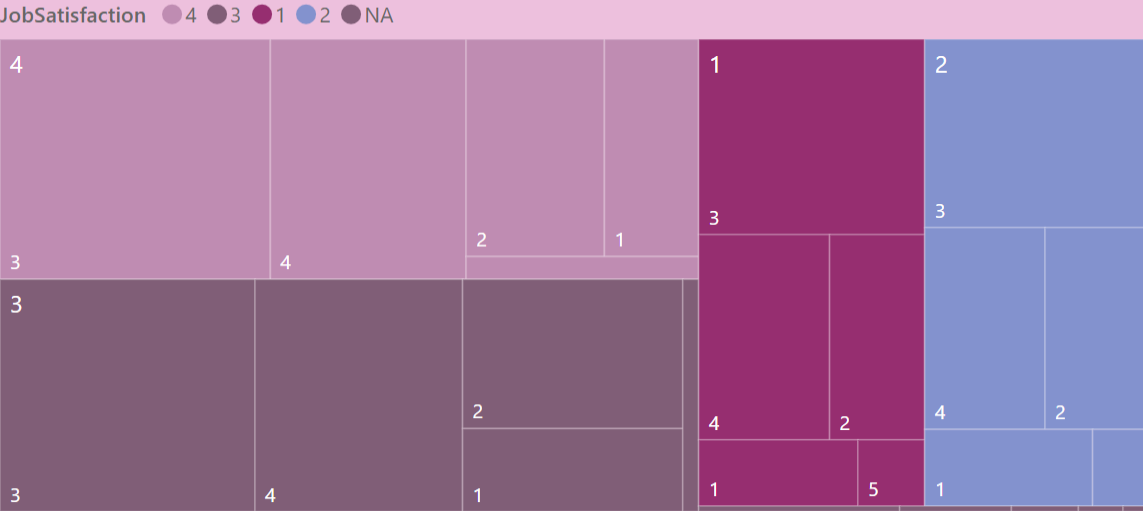


JobSatisfaction	Human Resources	Research & Development	Sales	Total
1	42	574	244	860
2	39	555	246	840
3	45	871	407	1323
4	63	868	436	1367
NA		15	5	20
Total	189	2883	1338	4410

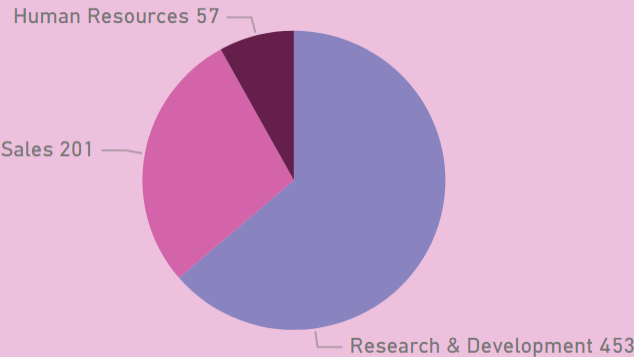
Count of Attrition by Department and Attrition



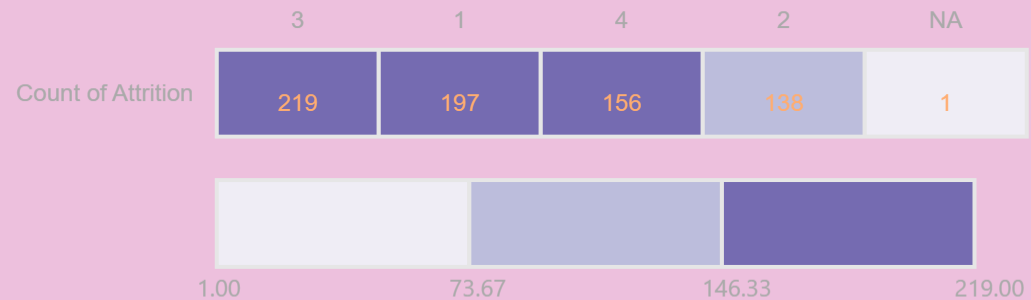
Count of Education by JobSatisfaction and Education



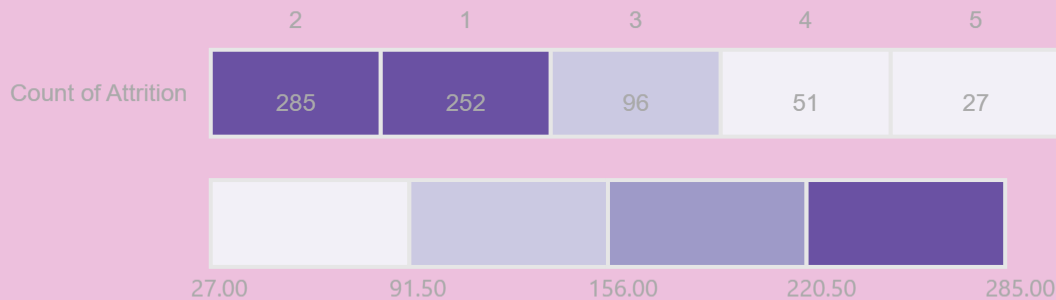
Count of Attrition by Department



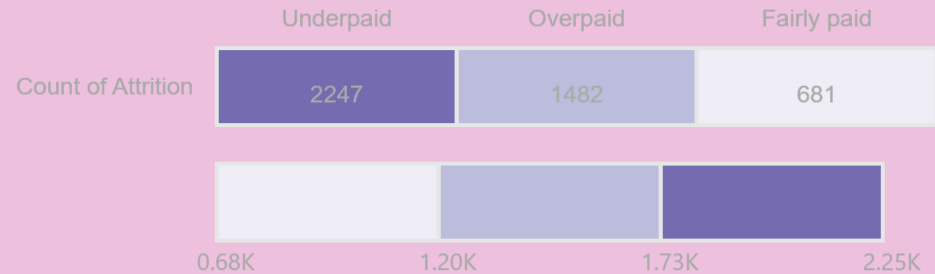
Count of Attrition by JobSatisfaction



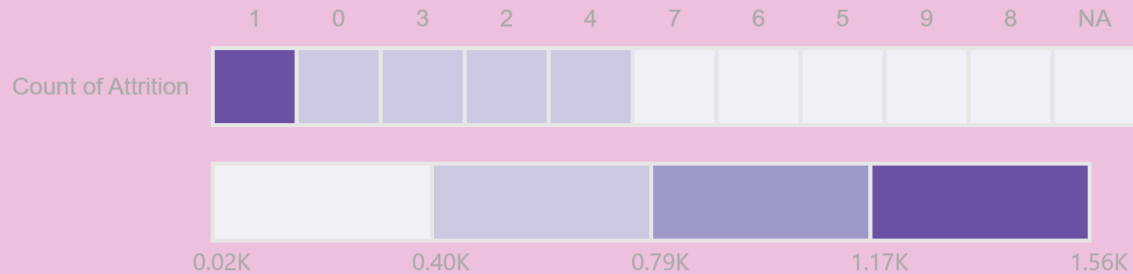
Count of Attrition by JobLevel



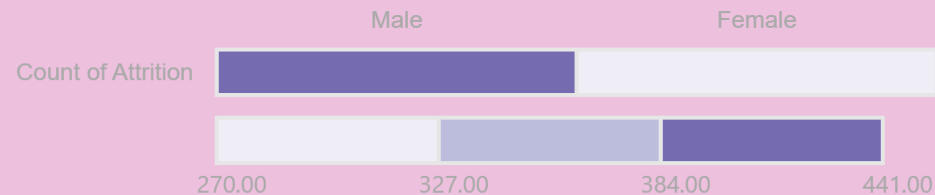
Count of Attrition by Salary



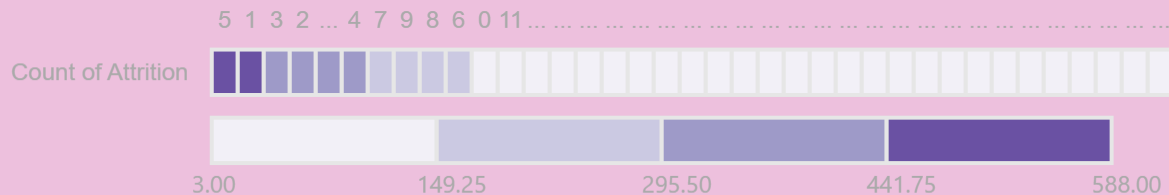
Count of Attrition by NumCompaniesWorked



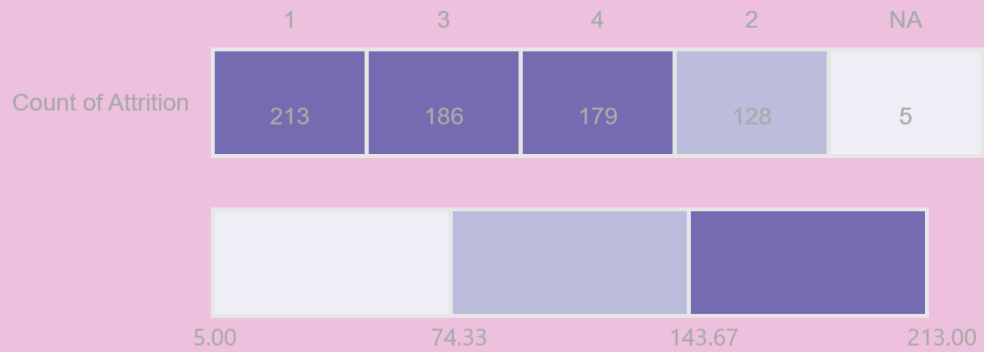
Count of Attrition by Gender



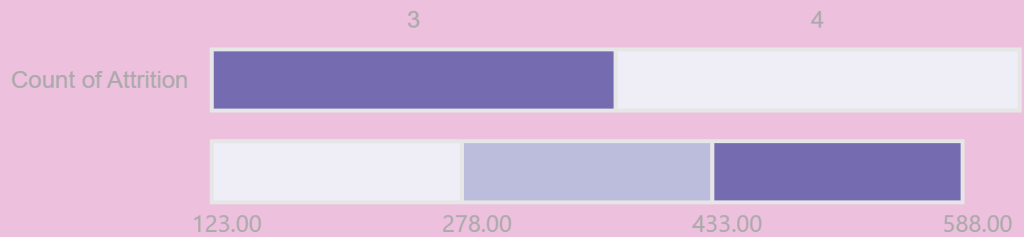
Count of Attrition by YearsAtCompany



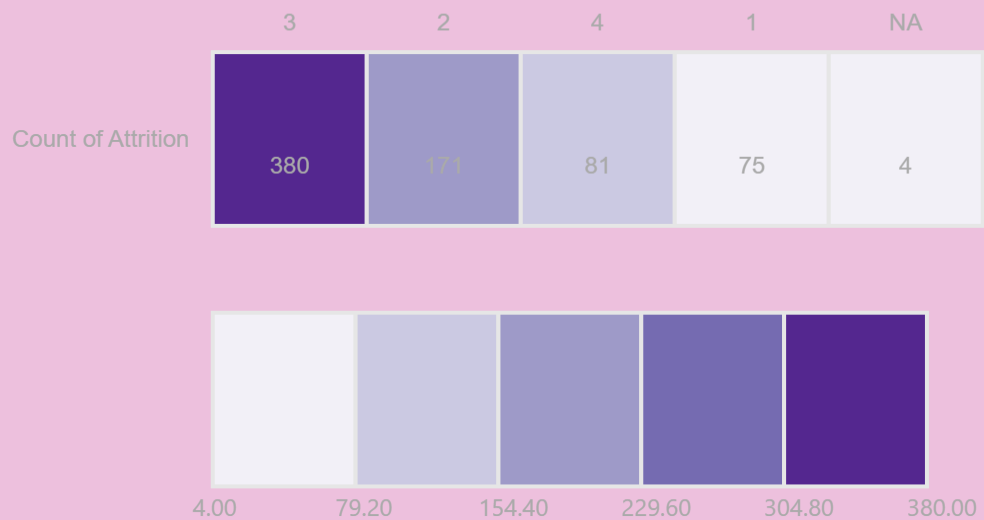
Count of Attrition by EnvironmentSatisfaction



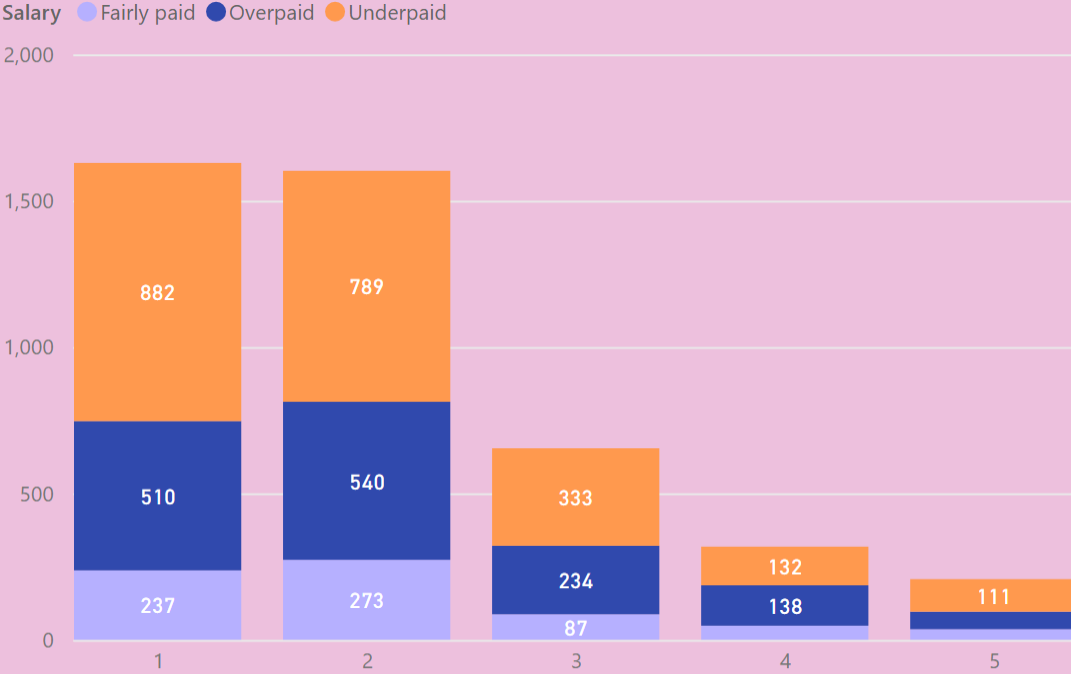
Count of Attrition by PerformanceRating



Count of Attrition by WorkLifeBalance

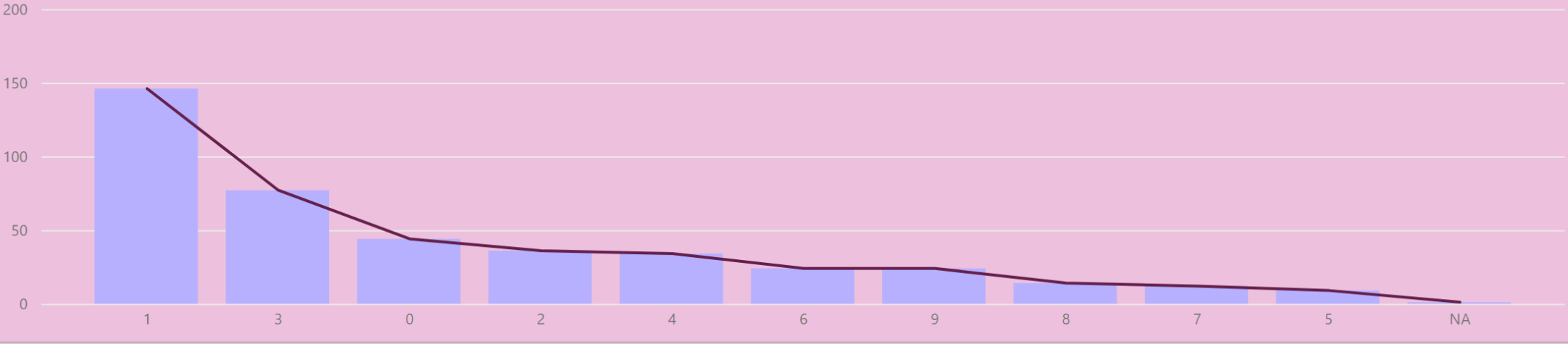


Count of Salary by JobLevel and Salary



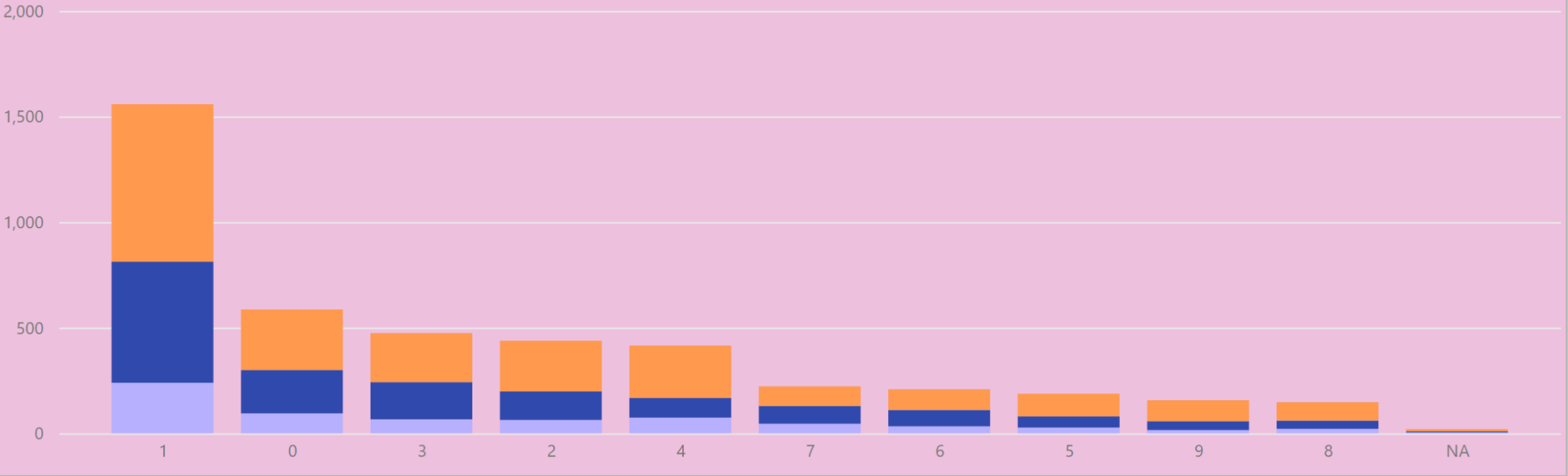
Count of JobSatisfaction and Count of EnvironmentSatisfaction by NumCompaniesWorked and JobSatisfaction

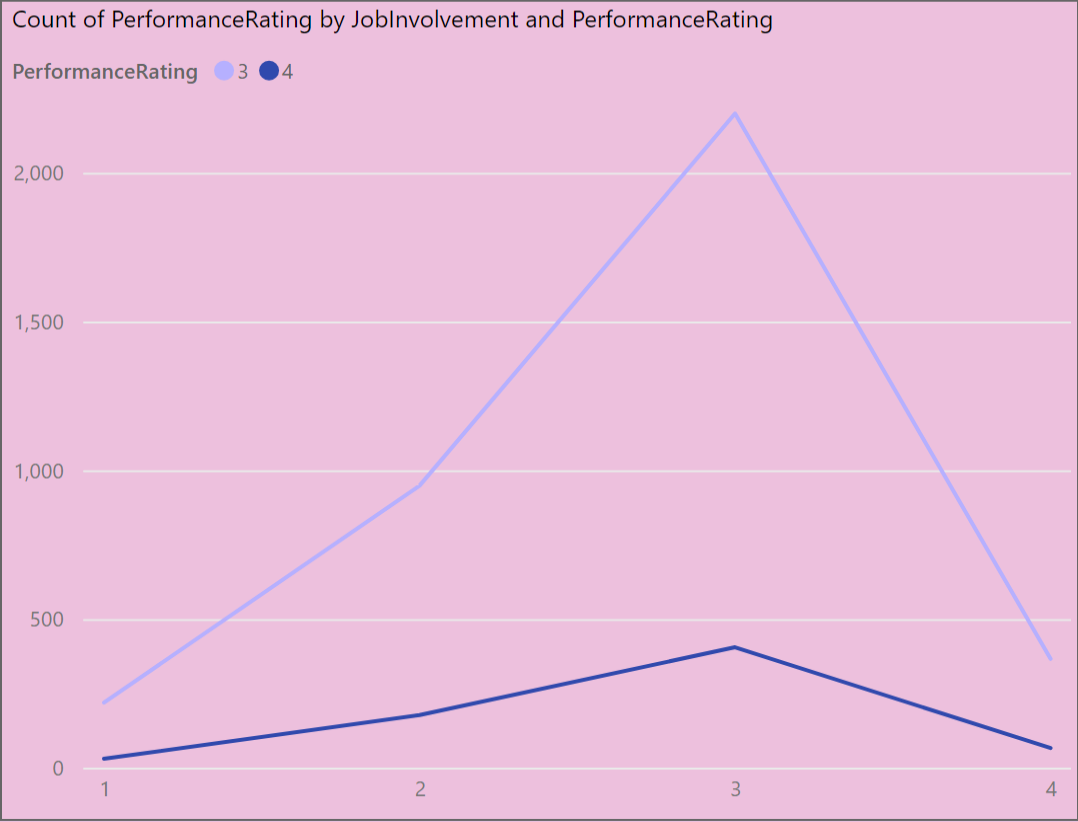
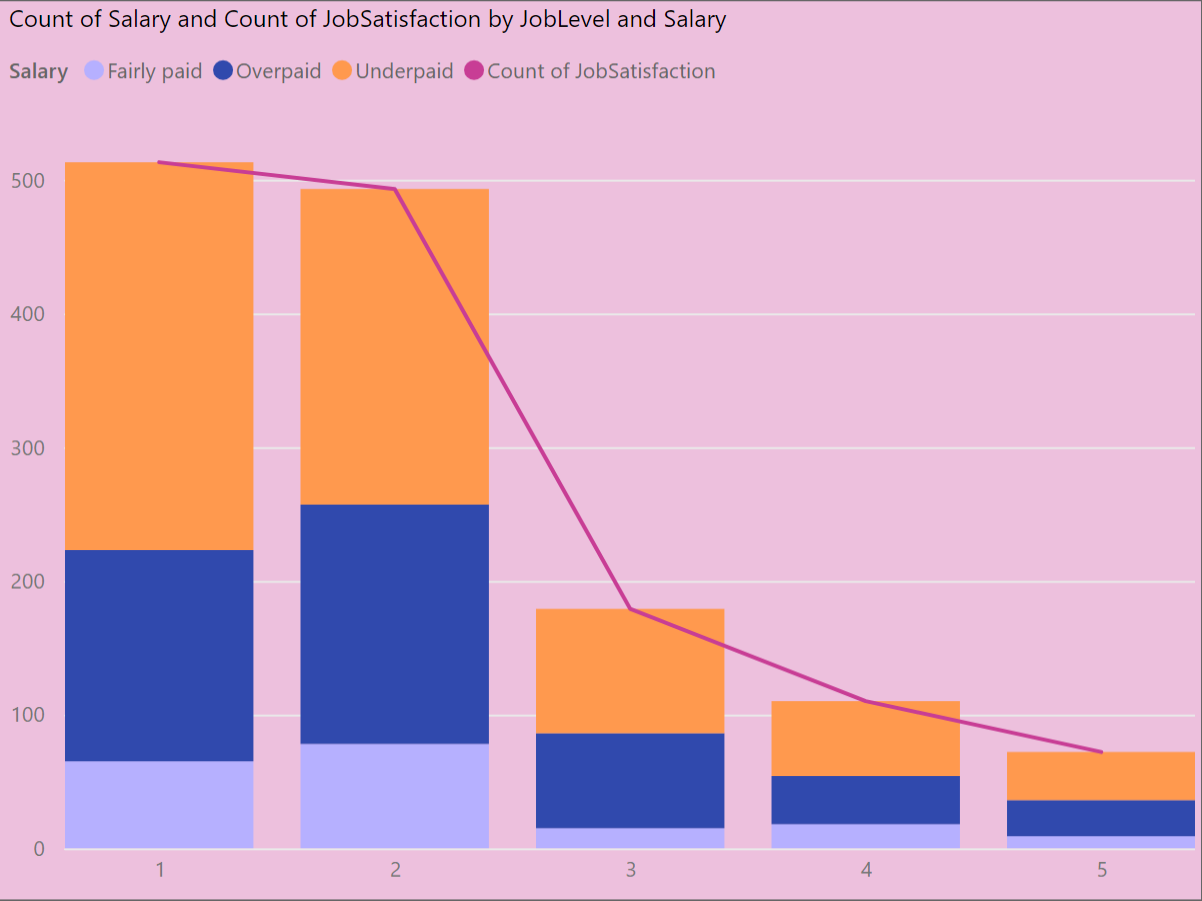
JobSatisfaction 4 Count of EnvironmentSatisfaction



Count of Salary by NumCompaniesWorked and Salary

Salary Fairly paid Overpaid Underpaid





INTRODUCTION

1.1 ABOUT THE DATA

THE DATASET CONTAINS 29 COLUMNS AND 4411 ROWS CONTAINING INFORMATION ABOUT A COMPANY'S EMPLOYEE DETAILS - THE DEPARTMENT THEY WORK IN EDUCATION LEVEL, JOB ROLE, JOB AND ENVIRONMENT SATISFACTION AND WHETHER THEY HAVE A "YES" FOR ATTRITION.

1.2 OBJECTIVES

THE MAIN OBJECTIVES OF THIS PROJECT ARE TO:

- (I) VISUALISE THE DATA TO SEE MEANINGFUL CORRELATIONS USING POWER BI.
- (II) TO CALCULATE THE TOTAL NUMBER OF EMPLOYEES FOR AND AGAINST ATTRITION.
- (III) TO ANALYSE THE ATTRITION RATES ACROSS VARIOUS DEPARTMENTS.
- (IV) ANALYSING THE FACTORS THAT MIGHT CONTRIBUTE TO HIGH ATTRIBUTION RATES SUCH AS JOB SATISFACTION, MONTHLY INCOME, SALARY HIKEs, ETC.
- (V) BUILDING A DASHBOARD WHICH CAN HELP THE ORGANISATION IN MAKING DATA-DRIVEN DECISIONS.

1.3 DATA CLEANING

THERE ARE NO NULL VALUES IN THE DATA. WE REMOVE THE COLUMN EMPLOYEE COUNT AS IT IS IRRELEVANT IN THE ANALYSIS. EACH EMPLOYEEID REFERS TO A UNIQUE EMPLOYEE. THERE ARE NO NULL OR MISSING VALUES.

METHODOLOGY

- * WE CALCULATE THE TOTAL NUMBER OF EMPLOYEES FOR THE ATTRITION VALUES “YES” AND “NO”. (CHART1)
- * WE CREATE BAR GRAPHS TO DEDUCE WHICH AGE GROUPS ARE FOR AND AGAINST ATTRITION. (CHART 2 &3)
- * A LINE GRAPH SHOWS THAT THE DEPARTMENTS LIKEWISE HAD THE SAME ORDER OF MOST SATISFIED AND LEAST SATISFIED EMPLOYEES IN THE ORDER MENTIONED ABOVE. (CHART 6). A PIVOT TABLE (CHART 5) DEPICTS THE NUMBER OF EMPLOYEES AND THEIR LEVEL OF JOB SATISFACTION IN EACH DEPARTMENT
- * A LINE CHART (CHART 4) BETWEEN JOB SATISFACTION AND YEARS AT THE COMPANY SHOWS THAT ALTHOUGH THE NUMBER OF SATISFIED EMPLOYEES WAS MORE THAN THE NUMBER OF EMPLOYEES WHO WEREN'T IN THE BEGINNING YEARS, AS THE YEARS AT THE COMPANY PROGRESSED, THE SATISFACTION LEVELS DROPPED DOWN. EVENTUALLY, THE NUMBER OF MOST SATISFIED AND LEAST SATISFIED EMPLOYEES CONVERGED.
- * A PIE CHART (CHART 8) IS USED FOR COMPARING ATTRITION BASED ON DEPARTMENT AND RESEARCH & DEVELOPMENT DEPARTMENT HAD THE HIGHEST ATTRITION ACCOUNTING FOR 453 EMPLOYEES FOLLOWED BY THE SALES DEPARTMENT ACCOUNTING FOR 201 EMPLOYEES AND THE HUMAN RESOURCES DEPARTMENT ACCOUNTING FOR 57 EMPLOYEES. A TREEMAP (CHART 7) ALSO DECODES THE NUMBER OF EMPLOYEES UNDER “YES” AND “NO” FOR ATTRITION IN EACH DEPARTMENT.

* A TREEMAP (CHART 9) BETWEEN JOB SATISFACTION AND EDUCATION LEVEL SHOWS THAT EMPLOYEES WITH HIGHER EDUCATION LEVELS WERE MORE SATISFIED THAN THOSE WITH LOWER EDUCATION LEVELS WITH THE COORDINATES OF (JOB SATISFACTION, EDUCATION LEVEL) NAMELY (4,3), (4,4). (3,3), (3,4) BEING GREATER IN PROPORTION.

* WE THEN CHECK THE CORRELATION BETWEEN VARIOUS FACTORS AND ATTRITION (CHART 10-17) TO DETERMINE THE CONTRIBUTING FACTORS FOR EMPLOYEE ATTRITION. FACTORS WHICH HIGHLY INFLUENCED ATTRITION AMONG EMPLOYEES WERE:

JOB SATISFACTION, SALARY, JOB LEVEL, YEARS AT COMPANY, ENVIRONMENT SATISFACTION AND WORK LIFE BALANCE WHICH HAD A HIGH CORRELATION WITH ATTRITION, FOLLOWED BY NUMBER OF COMPANIES WORKED AT, GENDER AND PERFORMANCE RATING WHICH WERE SLIGHTLY LESS CORRELATED WITH ATTRITION IN COMPARISON.

* TO CATEGORISE THE SALARIES OF THE EMPLOYEES INTO HIGH, MEDIUM AND LOW, WE CALCULATE THE AVERAGE SALARY OF ALL THE EMPLOYEES.

AVERAGE SALARY FOR EDUCATION LEVEL 5 = 65,000

AVERAGE SALARY FOR EDUCATION LEVEL 5 IN RESEARCH AND DEVELOPMENT
DEPARTMENT = 75,000

AVERAGE SALARY FOR EDUCATION LEVEL 5 IN HUMAN RESOURCES DEPARTMENT = 32,000

AVERAGE SALARY FOR EDUCATION LEVEL 5 IN SALES DEPARTMENT = 51,000

AVERAGE SALARY FOR EDUCATION LEVEL 1 = 61,000

AVERAGE SALARY FOR EDUCATION LEVEL 1 IN RESEARCH AND DEVELOPMENT
DEPARTMENT = 63,000

AVERAGE SALARY FOR EDUCATION LEVEL 1 IN HUMAN RESOURCES DEPARTMENT = 52,000

AVERAGE SALARY FOR EDUCATION LEVEL 1 IN SALES DEPARTMENT = 58,000

THIS IMPLIES THAT IRRESPECTIVE OF THEIR EDUCATION LEVEL, HUMAN RESOURCES
EMPLOYEES ARE HIGHLY UNDERPAID COMPARED TO OTHER DEPARTMENTS.

BASED ON THIS INFORMATION , WE WRITE A DAX SYNTAX TO CLASSIFY EMPLOYEE
SALARIES INTO “FAIRLY PAID”, “UNDERPAID” AND “OVERPAID”.

* WE WRITE THE FOLLOWING DAX QUERY TO CLASSIFY EMPLOYEE SALARIES INTO “UNDERPAID”, “FAIRLY PAID” AND “OVERPAID”.

```
1 Salary = IF(  
2     AND('Attrition data'[MonthlyIncome] > 50000, 'Attrition data'[MonthlyIncome] <= 65000),  
3     "Fairly paid",  
4     IF('Attrition data'[MonthlyIncome] < 50000,  
5         "Underpaid",  
6         "Overpaid"  
7     )  
8 )
```

* THE NUMBER OF EMPLOYEES BEING UNDERPAID WAS HIGHER FOR LOWER JOB LEVELS. (CHART 19) HOWEVER, THE NUMBER OF EMPLOYEES BEING UNDERPAID WAS HIGHER THAN THOSE BEING PAID FAIRLY AND OVERPAID, IRRESPECTIVE OF THE JOB LEVEL. THESE NUMBERS DECREASE WITH AN INCREASE IN JOB LEVEL.

* THE NUMBER OF EMPLOYEES SATISFIED WITH THE JOB DECREASED WITH AN INCREASING NUMBER OF COMPANIES THEY WORKED IN. (CHART 20) EMPLOYEES WHO WORKED IN 1 COMPANY WERE MORE SATISFIED WITH THEIR JOB AND ALSO WITH THEIR ENVIRONMENT THAN THOSE WHO WORKED IN 6 COMPANIES AND SO ON.

* A BAR GRAPH WAS PLOTTED AGAINST THE NUMBER OF COMPANIES WORKED AND SALARY (CHART 21). NUMBER OF EMPLOYEES WHO WORKED IN ONLY 1 COMPANY WHO WERE UNDERPAID WERE SIGNIFICANTLY HIGHER THAN THOSE WHO WORKED IN 0, 2,3 OR 4 COMPANIES.

* ALTHOUGH NUMBER OF EMPLOYEES WHO WORKED IN 1 COMPANY WAS HIGHER THAN THOSE WHO WORKED IN 2 COMPANIES, THE PROPORTION OF OVERPAID EMPLOYEES WAS HIGHER AMONG EMPLOYEES WHO WORKED IN 2 COMPANIES. THE PROPORTION OF UNDERPAID EMPLOYEES WAS HIGHER AMONG EMPLOYEES WHO WORKED IN 1 COMPANY, YET COUNT OF JOB SATISFACTION WAS HIGHER AMONG EMPLOYEES WHO WORKED IN 1 COMPANY AND IT DECREASED AS THE NUMBER OF COMPANIES WORKED AT INCREASED. (CHART 22)

* JOB INVOLVEMENT AND PERFORMANCE RATING HAD A SOMEWHAT LINEAR RELATIONSHIP WHICH IMPLIES THAT PERFORMANCE RATING INCREASES WITH AN INCREASE IN JOB INVOLVEMENT AND DECREASES WITH A DECREASE IN JOB INVOLVEMENT. (CHART 23)