

# HR ATTRITION ANALYSIS

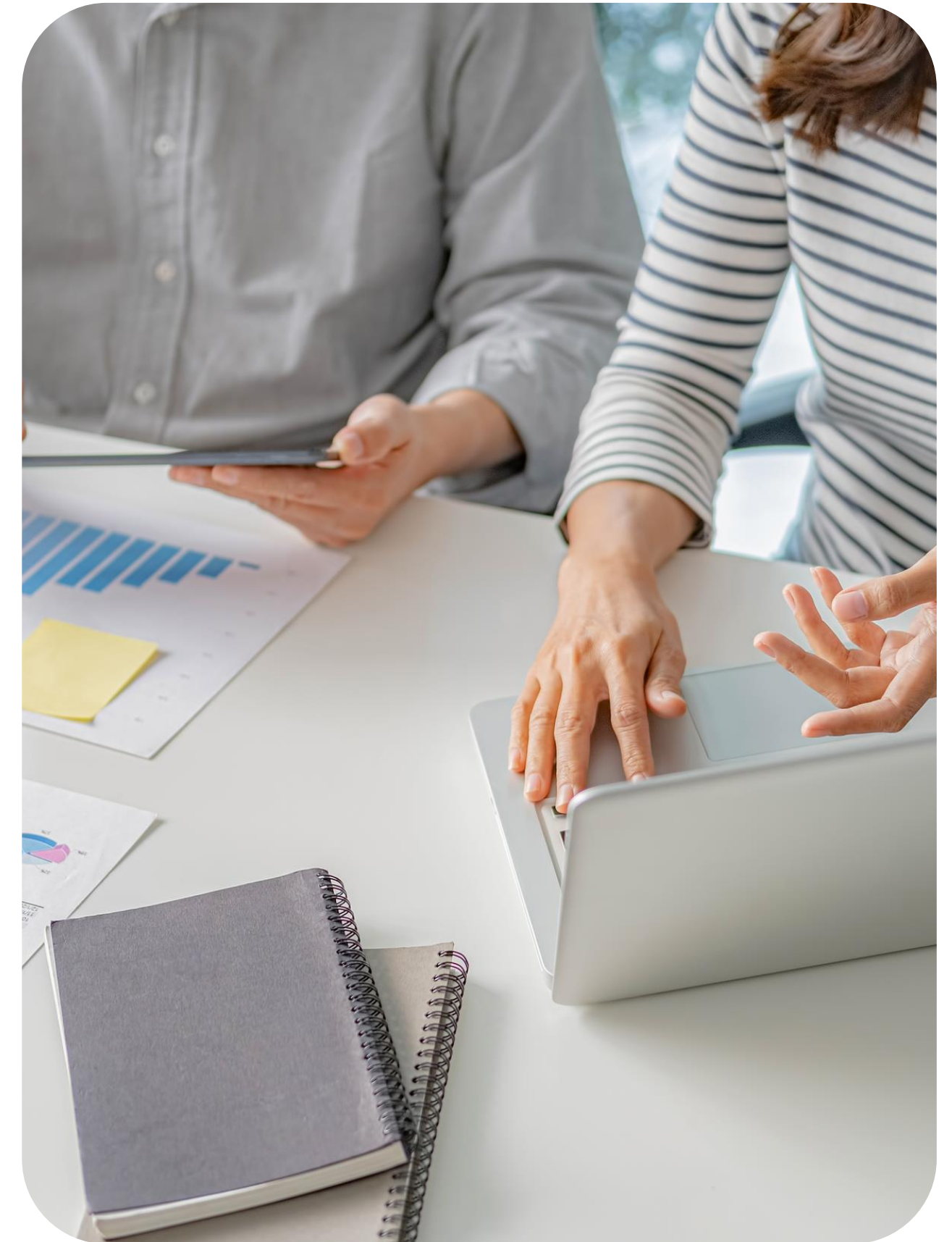
---



# PROBLEM STATEMENT

---

XYZ company which was established a few years back is facing around a 15% attrition rate for a couple of years. And it's majorly affecting the company in many aspects. In order to understand why employees are leaving the company and reduce the attrition rate XYZ company has approached an HR analytics consultancy for analyzing the data they have.



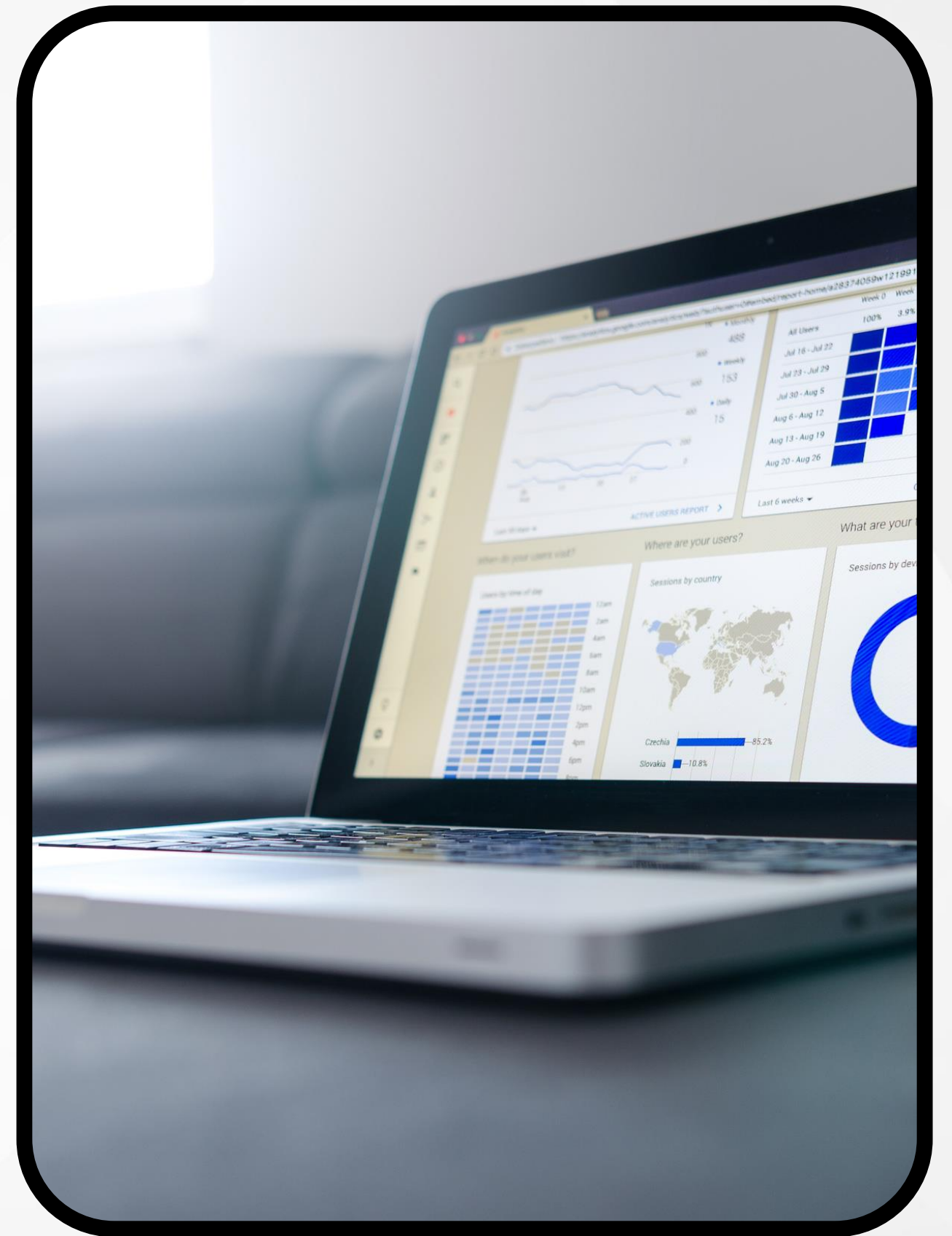
# STEPS TAKEN FOR ANALYSIS

---

1 **Data Cleaning & Preparation With Python**

2 **Further Modification in PowerQuery for better Data Viz**

3 **Data Visualisation Using Microsoft Power BI**



# EDA WITH PYTHON

## Problems

- Missing Values in 3 columns: No: of comps worked, Env Satisfaction, Work Life Bal
- Presence Of unnecessary/ redundant columns: EmpID,Emp\_count,over 18
- Outliers were present in some variables: Tot working years,years at company,years since last promotion,years with current manager

## Solutions

- Missing Values Were Imputed using ffill to maintain the mean and Std Dev of the distribution
- Unnecessary columns were dropped
- Outlier Treatment on a case to case basis

For Futher details on EDA , please refer to the google colab link shared on top left

# DATA CLEANING WITH POWERQUERY

## Problems

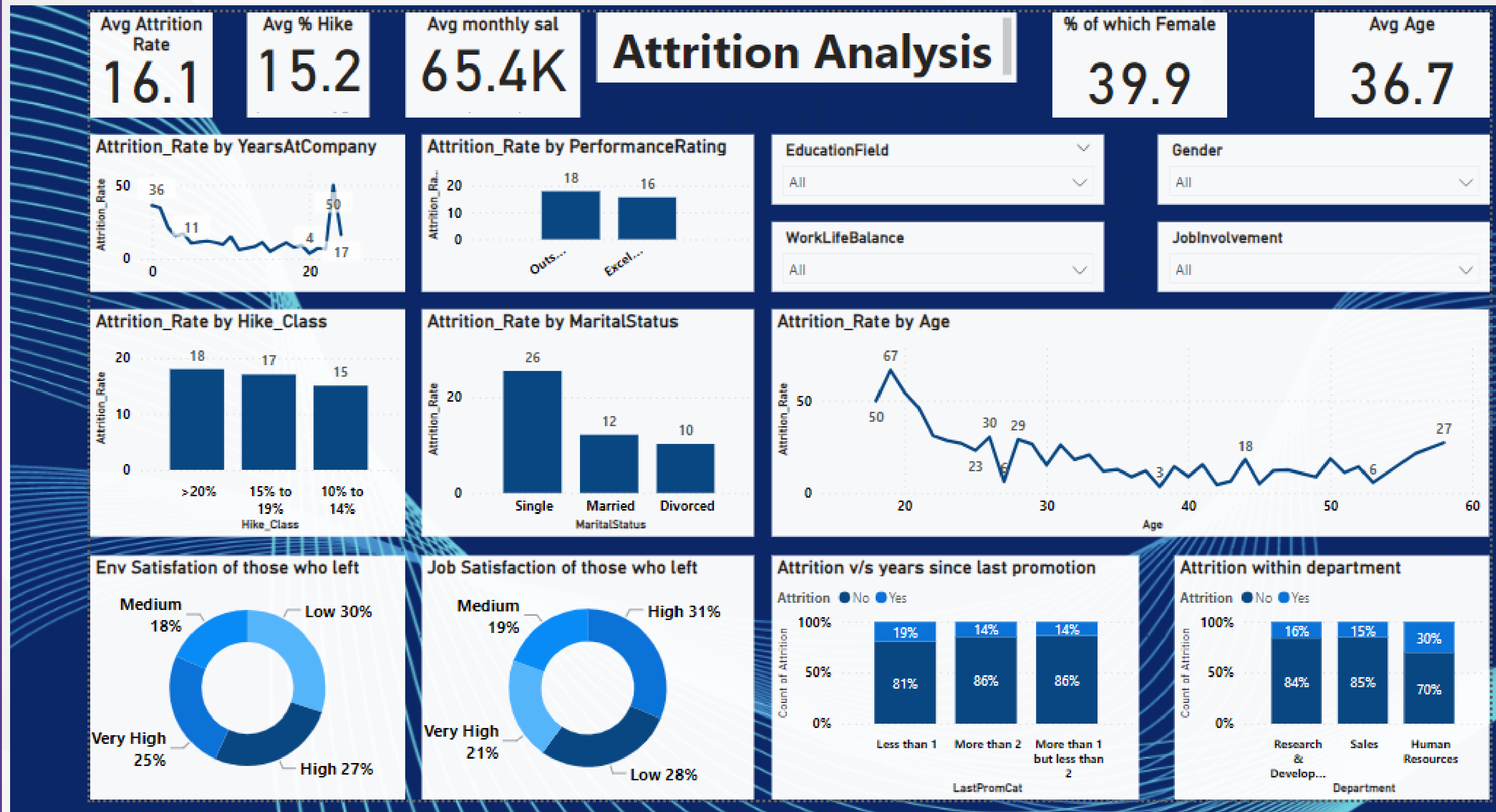
- Variables like job satisfaction, env satisfaction, performance rating etc are categorical variables but as these were given as numbers by PowerBI. This was an issue because a job satisfaction of 2 is not necessarily twice as good as a job satisfaction of 1. Also these numbers would lead to ambiguity as to whether 1 is good or a 4 is good.

## Solutions

- Transformed data type of all such variables using PowerQuery Editor and then replaced values with clearly understandable labels.



# DATAVIZ USING POWERBI



# INSIGHTS FROM DASHBOARD

## **Unfair Performance Rating System & Possible Gender Based Discrimination**

- Top Performers are leaving the company more. In this too female top performers have a higher attrition rate with on average 18% attrition among those who received a hike of >20%. In the same category attrition rate among males(16%) is lower than females(21%) which may be indicative of discriminative practices in promotion causing these high performing women to leave
- The performance rating system is not a proper bell shaped(even though there are 4 levels of rating, everyone is either outstanding or excellent) as it should be. Therefore there might be less motivation among high performers.
- Further evidences of gender discrimination with % of females with outstanding much less than the 40%(the %of women in the company)

# **INSIGHTS FROM DASHBOARD**

## **Attrition v/s age and years in company**

- Attrition tends to decrease with age and number of years in company. Attrition however peaks after around 23 years in the company possibly due to routine superannuation or also due to movement of senior level employees to other companies.
- Young Employees tend to resign more with a 67% attrition rate at 19 years. It then tends to reduce and stabilise at an employee age of around 30.

## **Possibility Of High Demand For HR Professionals**

- HR dept sees the highest attrition with almost 30% attrition.
- People from HR education background have an even higher attrition rate of 40%. However the profile of job and environment satisfaction among the employees from such background and left the company is similar to the overall profile of the same of all employees who left the company. This indicates it is not an issue with the way dept is run
- The possibility is that there is a huge demand for HR professionals due to which people are easily switching companies



# INSIGHTS FROM DASHBOARD

- Higher attrition(25%) was observed among single employees vis a vis the married and divorced employees (11%).
- Significant differences were observed between the salaries of those staying on(66000) and those leaving the company(62000). However the average hike in both these classes remained at around 15%
- There seems to be around 50% of those who left who tend to view the environment and job satisfaction on the lower end and the reason for the same needs to be understood more closely.