



Data Analyst Internship Take Test

- **By: Gaurav Jangra**

We have the data with the following headers (Age, Attrition BusinessTravel , DailyRate , Department , DistanceFromHome , Education , EducationField , EmployeeCount , EmployeeNumber , EnvironmentSatisfaction , Gender , HourlyRate , JobInvolvement , JobLevel ,JobRole ,JobSatisfaction, MaritalStatus , MonthlyIncome, MonthlyRate , NumCompaniesWorked ,Over18 ,OverTime , PercentSalaryHike ,PerformanceRating , RelationshipSatisfaction, StandardHours ,StockOptionLevel ,TotalWorkingYears , TrainingTimesLastYear, WorkLifeBalance , YearsAtCompany , YearsInCurrentRole , YearsSinceLastPromotion , YearsWithCurrManager). With over 400+ data rows.

- We have to delete the unwanted columns
- Rename a few headers according to our needs
- Take look at the problems we have and what could we possible outcomes

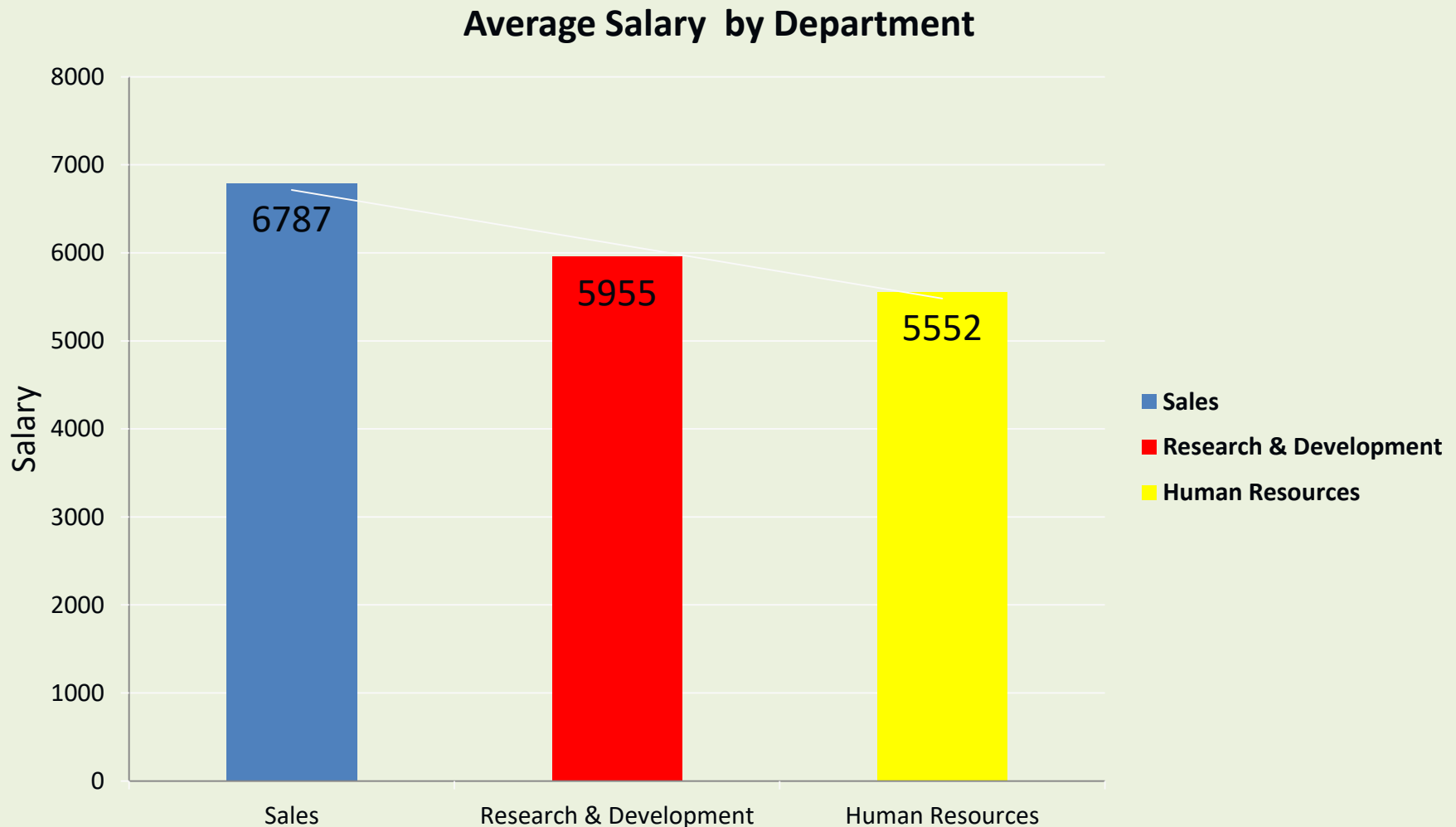
We will use visualization method of solve the following questions because it'll the easiest way

To make anyone understand the data :

- ☐ What is the average salary of employees by department?
- ☐ Which department has the highest number of employees?
- ☐ What is the distribution of gender in the company?
- ☐ Is there a correlation between years of experience and salary?
- ☐ Which department has the highest average salary?

Q1.What is the average salary of employees by department?

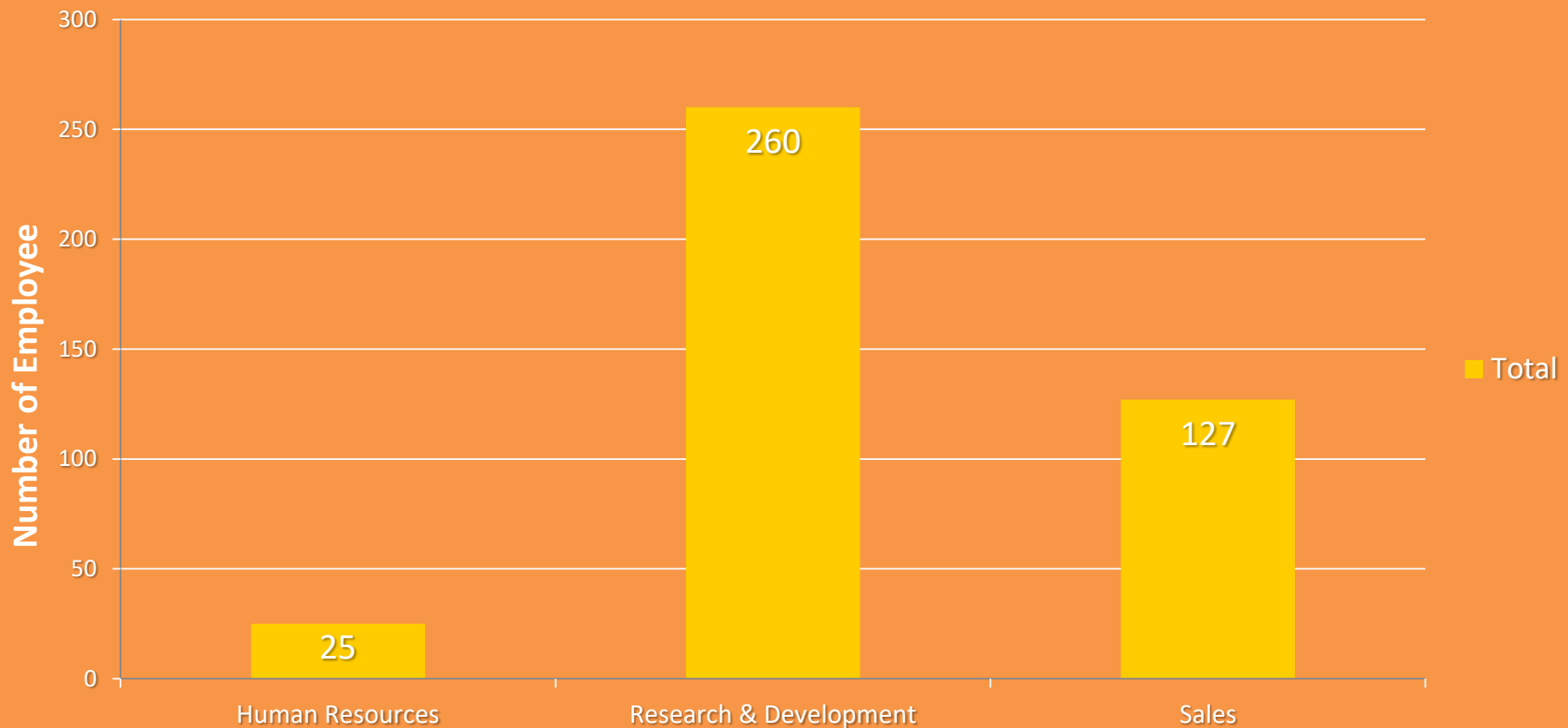
Approach= We have to find average salary by department. So we can find that using a Bar Chart . We have taken Departments on the X-axis and Salary on Y-axis, then we change value field setting to Average . we can conclude that the **Sales department has the highest average salary at 6787, followed by the Research & Development department with an average salary of 5955, and then the Human Resources department with an average salary of 5552.** This information can be useful for analyzing the company's salary structure and identifying areas for improvement, such as ensuring that salaries are competitive across all departments



Q2.Which department has the highest number of employees?

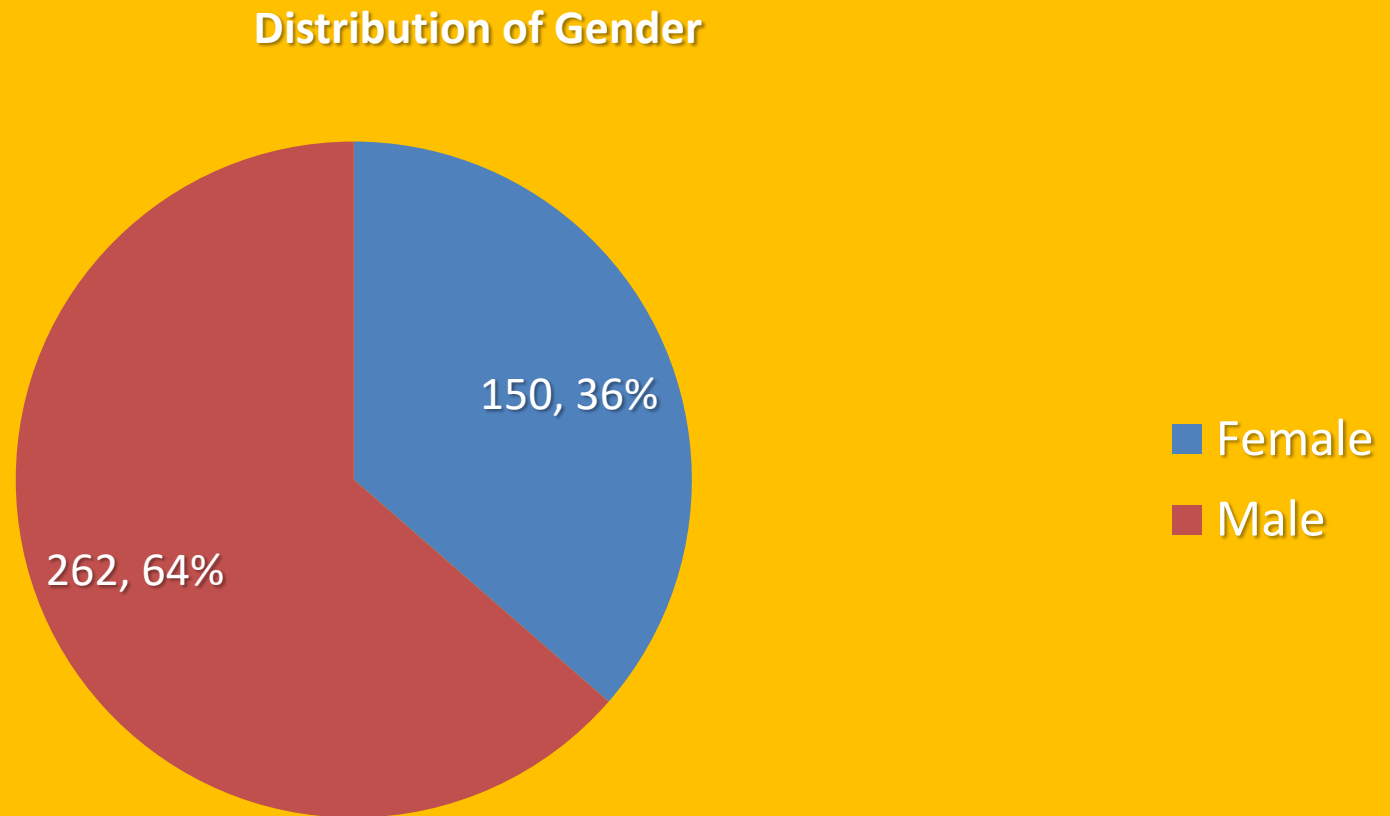
Approach=We have to find Which department has the highest number of employees for that we can use bar chart where Departments will be on X-axis and count number of employee id on use that on the Y-axis. . By Analyzing this chart we can say that **Research & Development Department have highest Number of Employees** in Company. And analyze the department where we can hire more people and fire people from a particular department.

Total No. of Employees



Q3. What is the distribution of gender in the company?

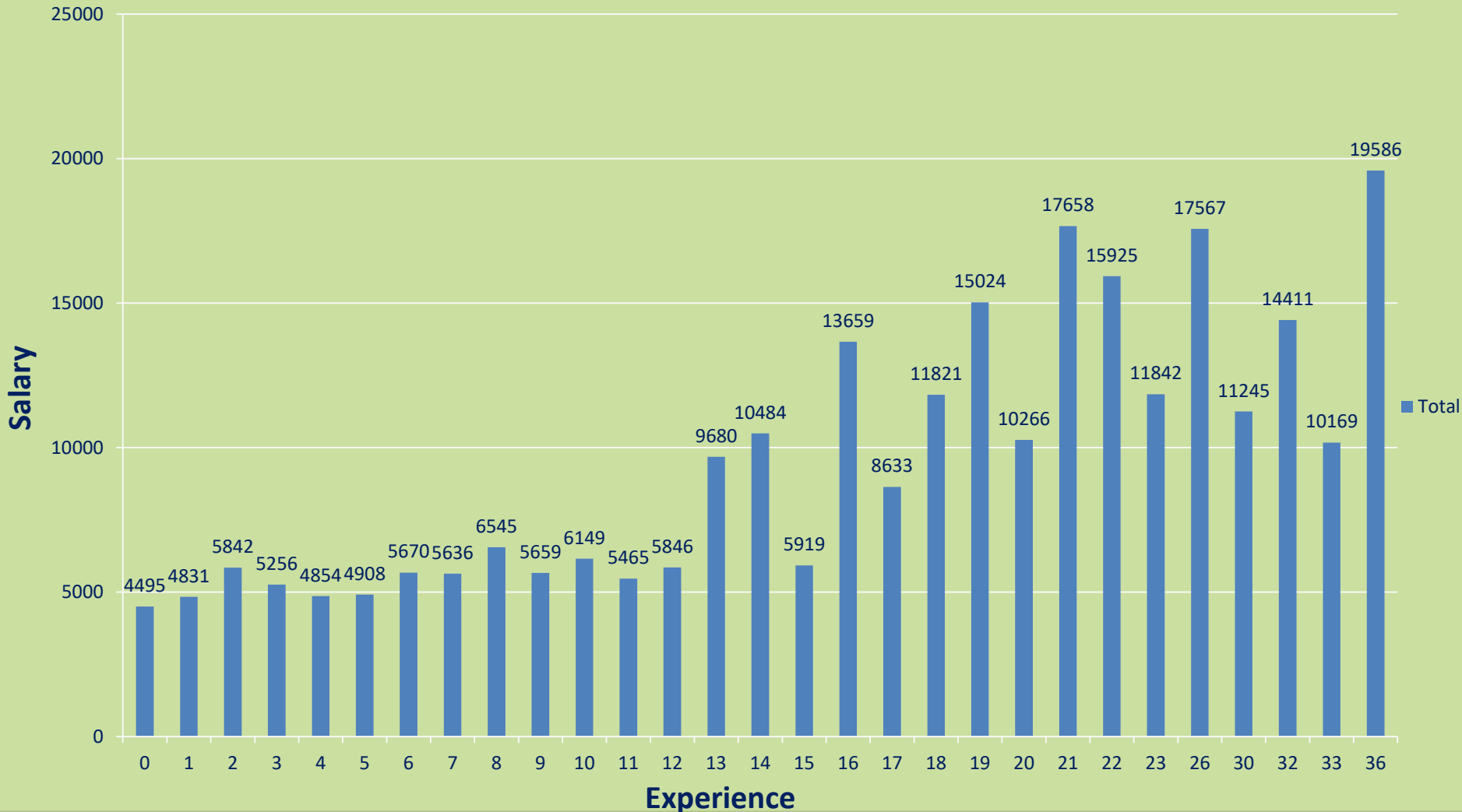
Approach= We can find distribution of gender in the company by using a Pie Chart. Divide the pie chart into two slices: one for male employees and one for female employees. Assigning the proportion of male and female employees to each slice. Adding a title and labels to the chart to make it easier to understand. Stakeholder can use this information to monitor diversity and inclusion initiatives and identify areas for improvement. **it seems that the company has a higher proportion of male employees, with 64% of employees identifying as male and 36% identifying as female. This translates to 262 male employees and 150 female employees.**



Q4. Is there a correlation between years of experience and salary?

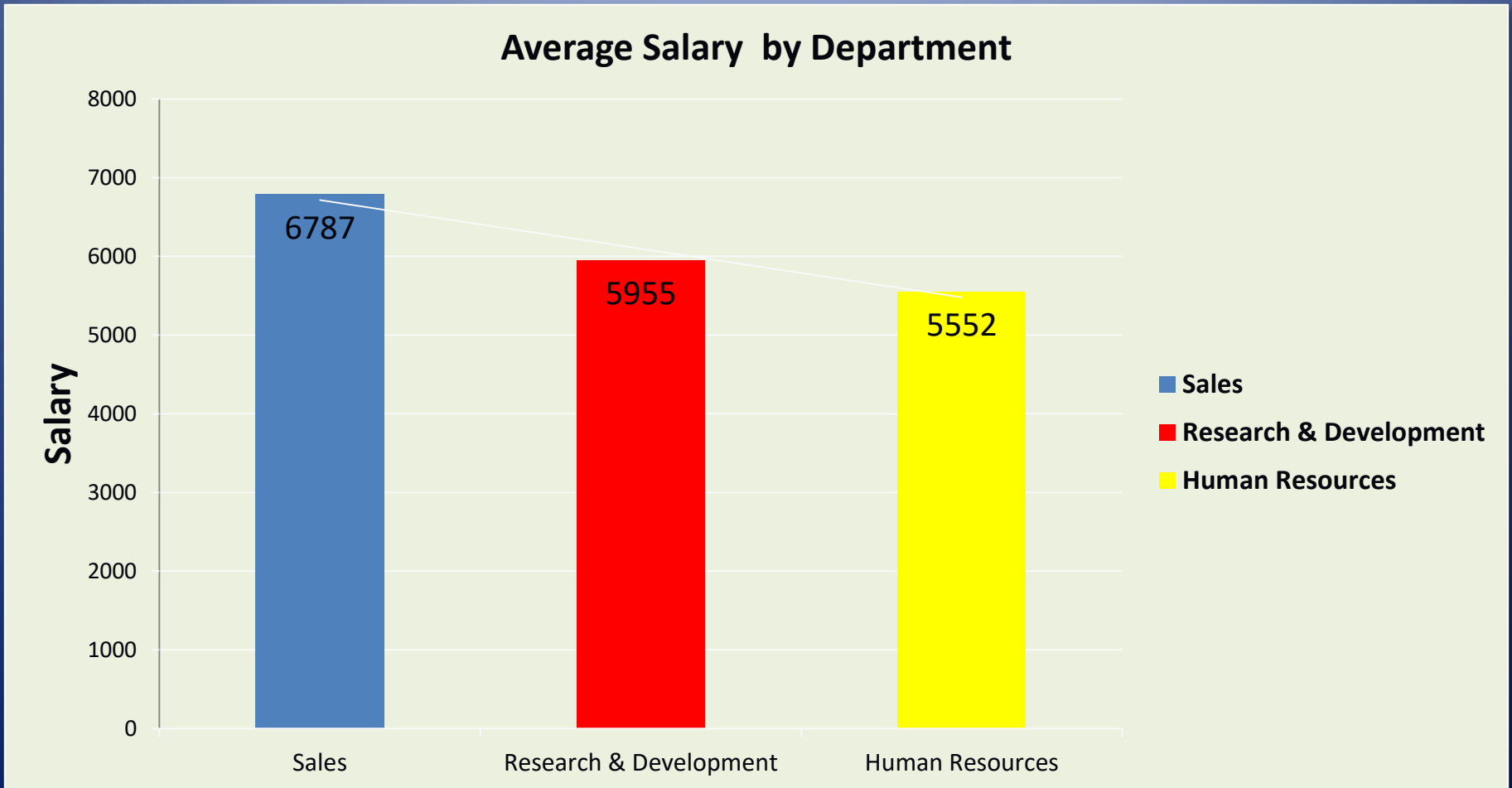
Approach=To find is there a correlation between years of experience, we can use a Bar chart by placing Experience on X-axis and Average Salary on the Y-axis. By analyzing the data, **we can see as the experience goes up, the average Salary will goes up**, except for the 15th year, we can see there a sudden dip of salary due to unknown reasons.

Correlation between Years of Experience and Salary



Q5. Which department has the highest average salary?

Approach= We have to find highest average salary by department. So we can find that using a Bar Chart . We have taken Departments on the X-axis and Salary on Y-axis, then we change value field setting to Average . Now this bar chart shows the average salary of employees in three different departments: Human Resources, Sales, and Research & Development. Each bar represents a department, and the height of the bar indicates the average salary for that department. By analyzing this chart we have conclude that **Sales department have the highest Average Salary** and Human Resources department have lowest salary. We can comparing salaries across departments and identifying areas where salary adjustments may be needed.



- Thank you