HR Metrics Master

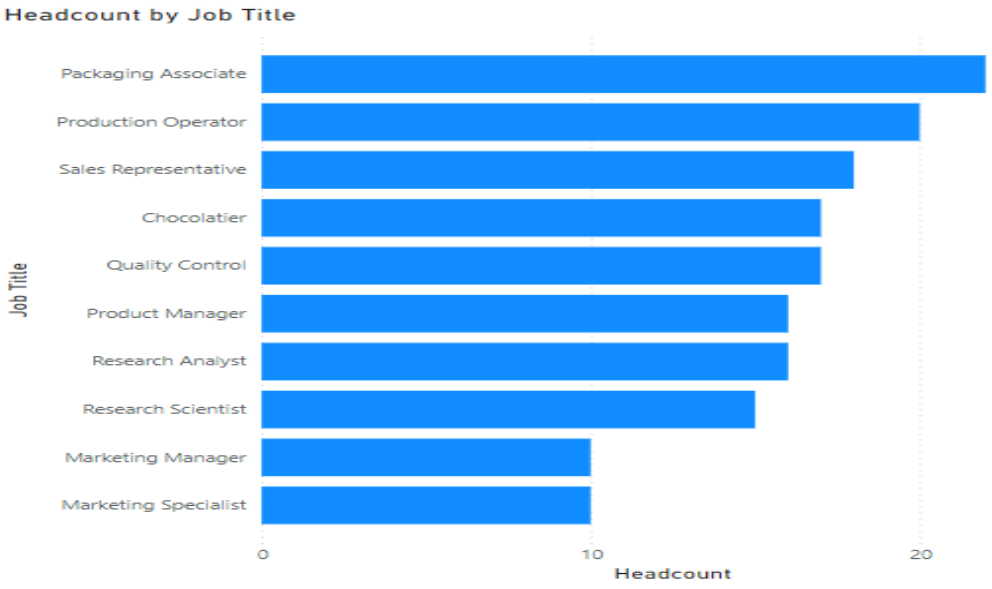
We will analyse the HR data and get insights using Power BI. To analyse the HR data we use 10 questions which are:

1) How many people are in each job?
2) The gender breakdown of the staff?
3) The age spread of the staff
4) Which jobs pay more?
5) Top earners in each job
6) Qualification vs Salary
7) Staff growth trend over time
8) Employee filter by starting letter
9) Leave balance analysis
10) Quick HR Dashboard

Import the data from Excel into the Power BI. Converted Date of join column into Date type and some of the columns like salary and age into numerical type. We renamed the HR data to staff.

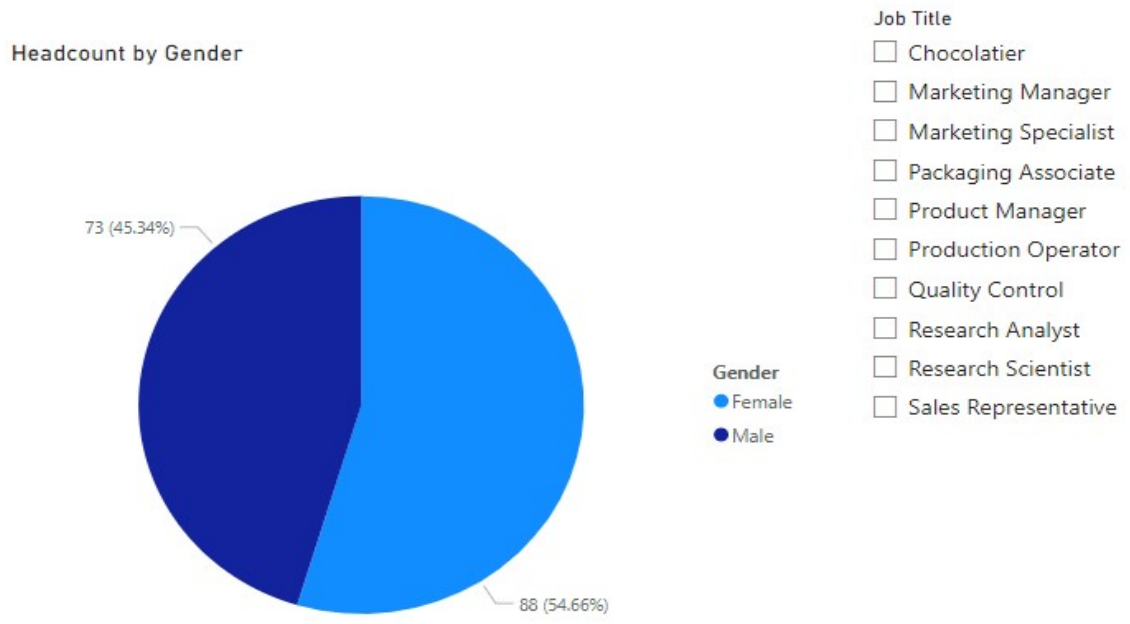
1) How many people are in each job?

We created a new measure Headcount = countrow(staff) and used a bar chart to visualize the number of people in each job. Here the job title is on the y-axis and the Headcount is on x-axis. We can observe that Packaging Associate is our most popular job with 22 people and marketing specialist we have 10 people.



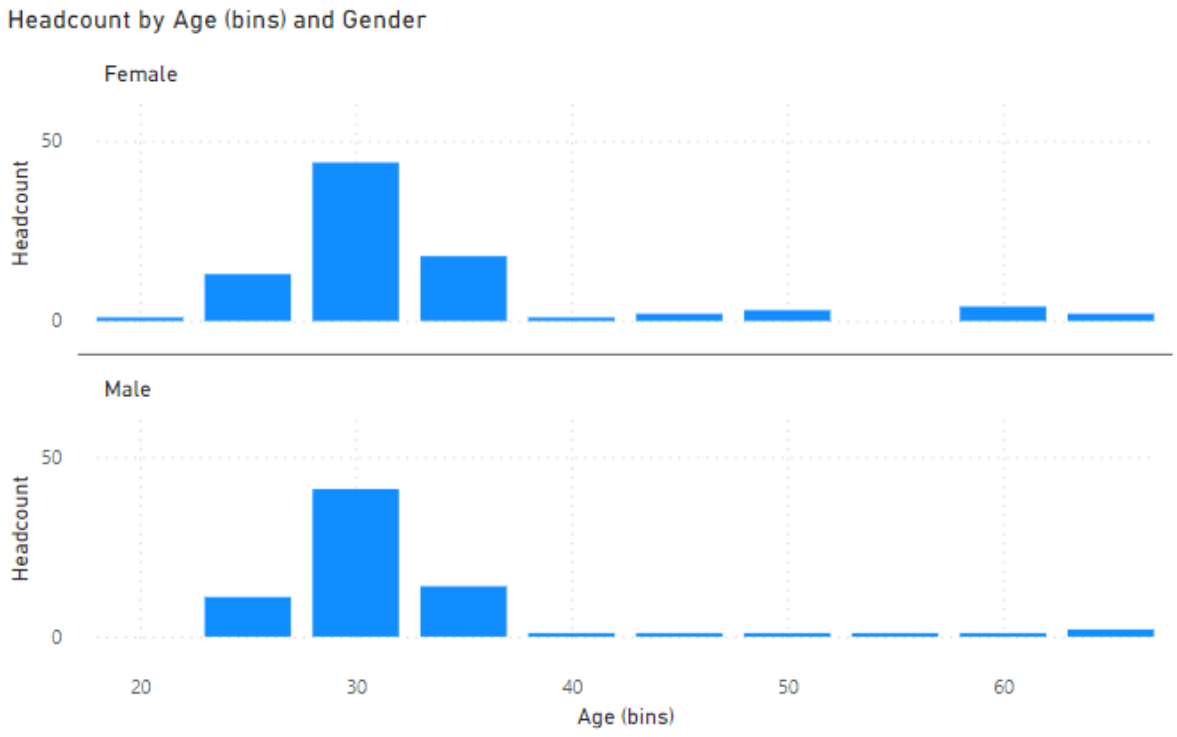
2) Gender break-down of the staff

We use a pie chart to get the gender breakdown of the staff, we put gender and Headcount columns in it. We have two genders, Male and Female. To see the gender breakdown for a specific job title, we put a slicer and in that slicer, we put the job title. So, that we can see the gender breakdown of a specific job title. If we want to multi-select, we can hold down the control key and select all we want.



3)Age spread of the staff - with histograms

We created a new group called Age(bins) in the Age column to create the range of ages of bin size 5. We put this Age(bins) column on the x-axis of the column chart and Headcount on the y-axis. We divided the distribution of the staff based on gender using small multiples of 2 rows and 1 column.



4)Which jobs pay more?

We created new measures Avg. Salary = AVERAGE(staff[Salary]), Max. Salary = Max(staff[Salary]), and Min. Salary = Min(staff[Salary]). We created a table with two columns Job Title, Avg. Salary, Headcount, Max. Salary, and Min. Salary. Product Manager has the highest average salary whereas Packaging Associate has the lowest average salary.

Job Title	Avg. Salary	Min. Salary	Max. Salary
Chocolatier	52,176.47	51000	54900
Marketing Manager	73,530.00	70800	74900
Marketing Specialist	62,170.00	60700	63600
Packaging Associate	33,409.09	28900	36200
Product Manager	82,825.00	80700	85000
Production Operator	37,500.00	33000	39800
Quality Control	43,135.29	41500	45000
Research Analyst	57,812.50	55600	60000
Research Scientist	77,566.67	76100	79300
Sales Representative	47,511.11	45500	49800
Total	**54,231.06**	**28900**	**85000**

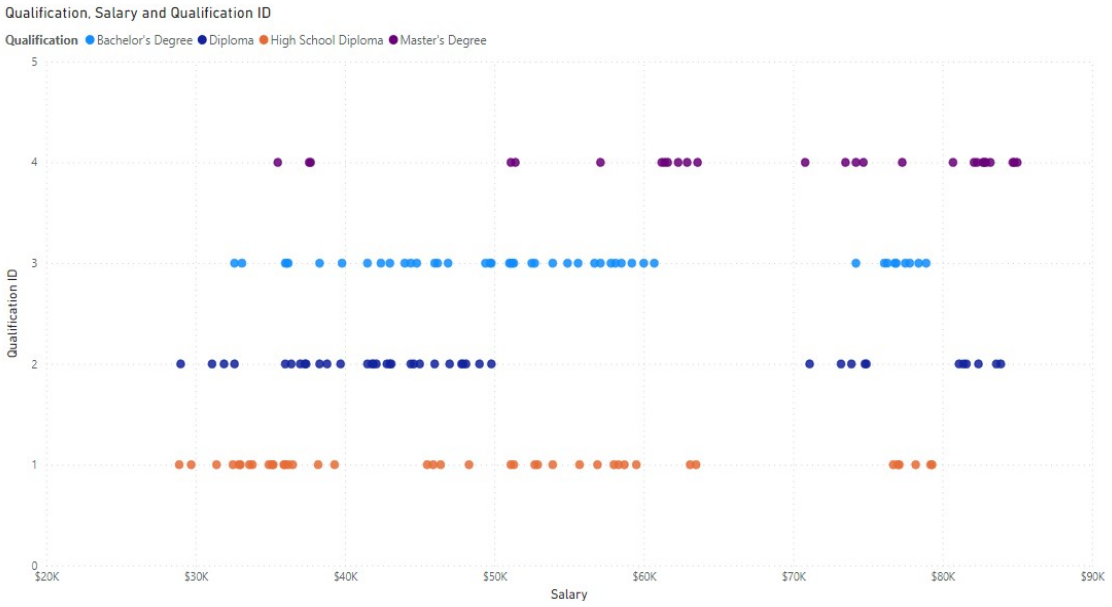
5) Top earners in each job

We copied the job title bar chart into the workbook and created the table with Name, Email ID, Gender, and Sum of Salary columns. Using the 'Filter type of Top N' in 'Filters on the visual option', we will get the top 3 Names, Email ID, Gender, and Sum of Salary based on the Sum of Salary column value. Now, if we select the specific job title then, it will show the top 3 earners in that job title.

Name	Emp ID	Gender	Sum of Salary
Samaira Agarwal	AC0100	Female	$36,200
Shari McNee	AC0060	Female	$36,200
Simon Kembery	AC0088	Female	$36,200
Total			**$1,08,600**

6) Qualification vs. Salary

We use a scatter chart in this question with salaries on the x-axis and Qualification ID on the y-axis. For this, we have to create a new query. Right-click on the Education Qualification and click on ‘add a new query’, remove the duplicates, transform it into a table, assign the numbers based on the order of Education qualification and name the column ‘Qualification ID’. This is created as the new table qual in the data, we linked qual and staff based on Education Qualification column. Added Qualification as legend.



7) Staff growth trend over time

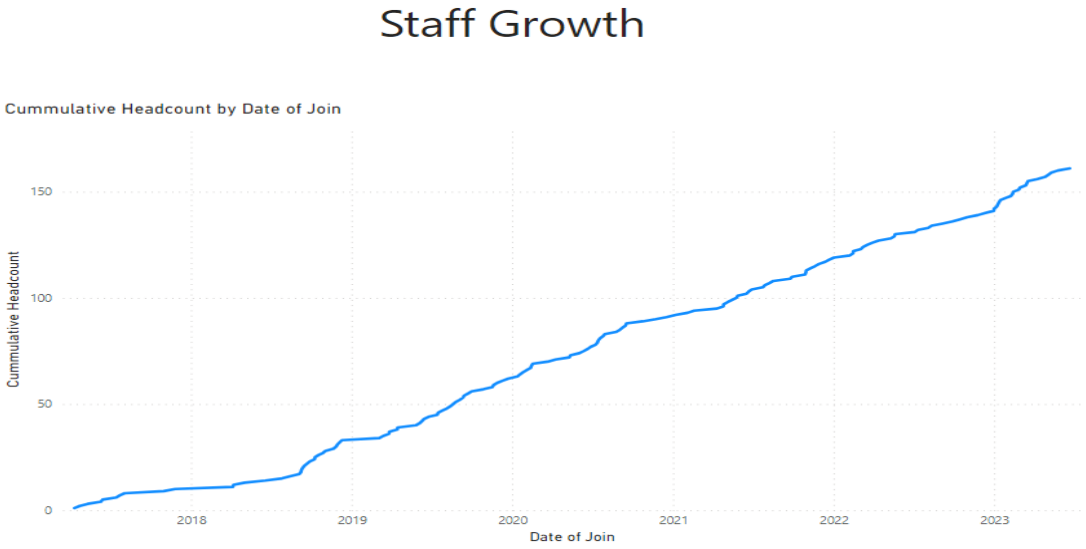
Here, we use a line chart with ‘Date of join’, ‘Cumulative Headcount’ the on x-axis and Headcount on the y-axis. We created a new measure

Cumulative Headcount =

var currentDate = LASTDATE(staff[Date of Join])

return CALCULATE([Headcount]), all(staff[Date of Join]), staff[Date of Join] < = currentDate

Now, we can get how many people joined each day and the total number of people until that selected date.



8)Employee filter by starting letter

We generate a column where we can see the first letter of the employee. We go to the transform data which will take us to the power query, select the name column, add column, extract, and first characters and just type 1 which will give us the first letter.

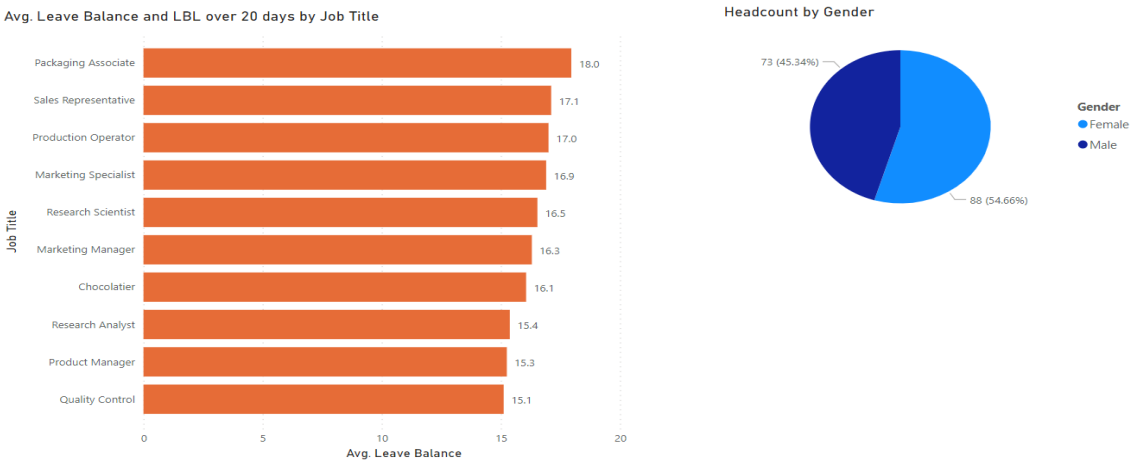
We will add a slicer and bring the first letters into that and add a table with Emp ID, Name, Job Title, and Sum of Salary as its columns. Sorted the table in descending order based on the Sum of Salary column and applied ‘data bars’ with blue colour using ‘conditional formatting’. Now we can see the salary of the employee by their first letter.

We put a ‘card visual’ and added Headcount in that to see how many employees are there based on the first letter of the employee.

9) Leave balance analysis

Employees have a leave balance range of 1-37. If somebody is just saving up their leave like a leave balance of more than 20 and not using it that could indicate that they may be overworked, tired or fatigued. So we will calculate the Avg. Leave Balance = average(staff[Leave Balance]).

We also make another new measure LBL over 20 days = CALCULATE([Headcount]), staff[Leave Balance] > 20. We will create a bar graph with a job title on the y-axis and Avg. Leave Balance on the x-axis. Surprisingly, Packaging Associate job has the highest Avg. Leave Balance(18). We drop the LBL over 20 days column into the tooltip box so that we can able to see LBL over 20 days for each of the job titles.



10) Quick HR Dashboard

I have changed the background of my workbook and I added some of the key indicators of our data.