HR ATTRITION ANALYSIS

EXCEL BASE DASHBOARD

BY

ESTHER NWEZE

PROBLEM STATEMENT

Employers often overlook the hidden reasons behind rising attrition rates, from low pay and long commutes to poor job satisfaction and work conditions.

Today, employees switch jobs faster than ever, driving up recruitment costs and disrupting teams. To shed light on this, I analyzed a real-world HR dataset from Kaggle, exploring the key drivers of attrition in a company of 1,470 staff. This project reveals where HR leaders should focus to reduce turnover and keep tale.

OBJECTIVES

This project was designed to:

- Transform raw CSV data into a structured, clean format using **Power Query**
- Build a **dynamic, interactive Excel dashboard and Charts Titles** that respond to slicer selections for HR clearer storytelling.
- Enable stakeholders to filter, slice, and drill down attrition insights easily
- Highlight key drivers influencing attrition
- Provide visual insights to inform better HR strategies

DATASET INFORMATION

- **Source**: Kaggle: https://www.kaggle.com/datasets/saadharoon27/hr-analytics-dataset
- **Format**: CSV
- **Rows**: 1,470 records
- **Columns**: EmpID, Age, Attrition, BusinessTravel, Department, DistanceFromHome, Education, EducationField, EnvironmentSatisfaction, Gender, JobInvolvement, JobRole, JobSatisfaction, MaritalStatus, MonthlyIncome e.t.c..

Tools & Technologies

- Microsoft Excel: Advanced Excel Formulars, Dashboarding design and visualization
- Power Query: Data cleaning, transformation & column creation
- Techniques: Descriptive analysis, segmentation by department and job roles, correlation analysis
- Kaggle: Dataset Source

DATA CLEANING & TRANSFORMATION (power query)

Dropped the following columns because they are either redundant, constants, or identifiers, and may not add value to my analysis:

- **EmployeeCount:** Usually a constant (often always 1 per row).
- **Over18**: It has just one constant letter constant ("Y").
- **StandardHours**: Often constant.
- **AgeGroup** and **Age Bucket**: I added a new column called AGE BRACKET, so I remove the Age Group Column
- **MonthlyRate** and **DailyRate**: I dropped the two column because I have Monthly Income column already.
- **Replaced** the jobe role names to a shorter names so that my dashboard will not look too conjested.

Standardized values:

- Shortened long job role names for cleaner visuals
- Renamed *Salary Slab* to *Salary Bucket*
- Replaced ranges (e.g., *5k* ⟶ *500k*) for realistic salary bands
- Multiplied *MonthlyIncome* by 100 to align with currency scale

Created new columns to aid my calculation:

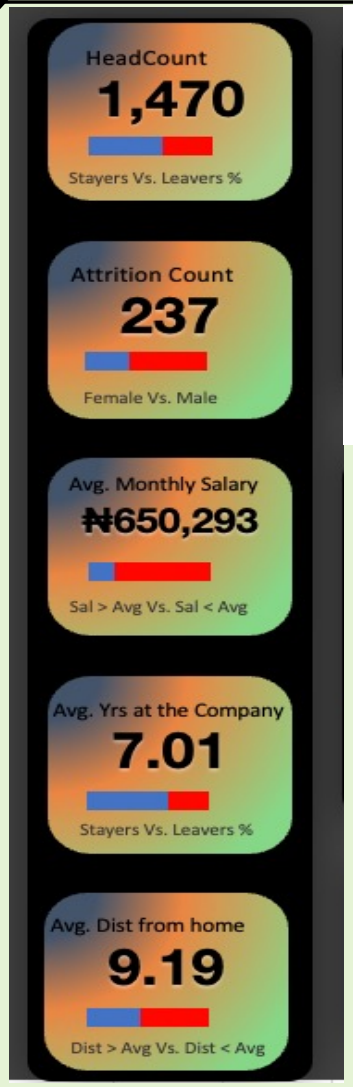
- Female Attrition and Male Attrition.
- Leaver's Monthly income
- Leavers Salary above overall average salary.

Removed duplicates & nulls via *EmpID*

- Ensured consistent data types for analysis.

DATA EXPLORATION & INSIGHT

KPI CARDS



KPIs	VALUES
Head Count	1,470
Sum of Attrition	237
Avg of Monthly Income	₦650,293
Avg of Years At Company	7.01
Avg of Distance From Home	9.19

Insight:

- A moderate attrition rate (16%) suggests the organization needs targeted retention strategies.
- Leavers have an average experience of 7 years, meaning valuable employees are exiting.

Question 2

What is the Job Roles with Highest Attrition?.

					Full	◉			
					Half	◎			
					Empty	○			
JobRole	Count of EmpID	Sum of Emp that left	Sum of female	Sum of male			Full	Half	Combined
Lab Tech	259	62	16	46	16	62	◉◉◉◉◉◉	○	◉◉◉◉◉◉○
Sales Exc	326	57	20	37	#N/A	#N/A	◉◉◉◉◉	◎	◉◉◉◉◉◎
R. Sci	292	47	17	30	#N/A	#N/A	◉◉◉◉	◎	◉◉◉◉◎
Sales Rep	83	33	16	17	#N/A	#N/A	◉◉◉	○	◉◉◉○
HR	52	12	6	6	#N/A	#N/A	◉	○	◉○
M. Dir	145	10	4	6	#N/A	#N/A	◉	○	◉○
Health Rep	131	9	5	4	#N/A	#N/A		◎	◎
Manager	102	5	2	3	#N/A	#N/A		◎	◎
R. Dir	80	2	1	1	#N/A	#N/A		○	○

1. Chart Title formular:

=TEXT(J61,"0.0%")&" of leavers are "&jobrole

2. % value formular:

=XLOOKUP(jobrole,H50:H58,J50:J58)/E59

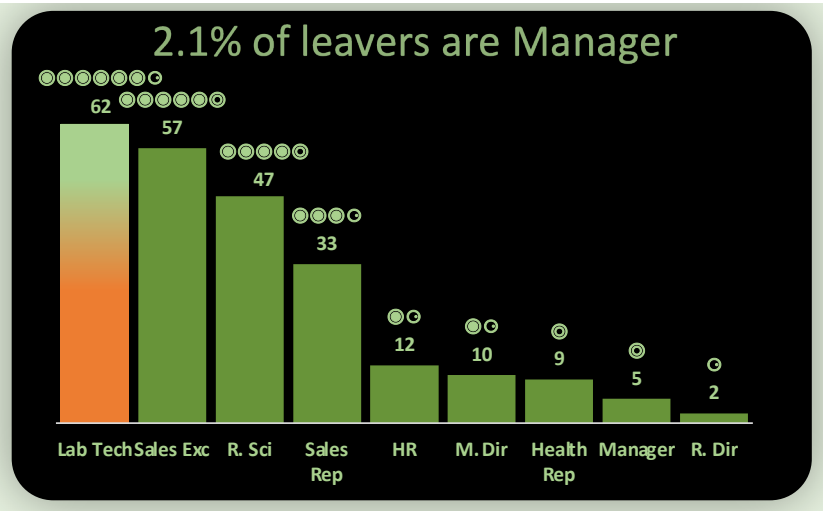
3. Icon formular: =REPT($N$46,J50/10),

=IF(MOD(J50,10)>=5,$N$47,$N$48),

=CONCAT(O50:P50)

4. Highlight Formular:

=IF(H50:H58=C74,K50:K58,NA()) e.t.c



Insight:

- One out of every four leavers is a Lab Technician, this is a critical red flag.
- Sales-related roles also show high attrition, hinting at possible job pressure or target-related stress.
- Roles like Healthcare Manager and HR show much lower attrition, suggesting stronger satisfaction or career paths.

Question 3

What is the Department-Age Attrition Heatmap (R&D Focus)

Age Bucket	Count of EmpID	% value
18 - 20	4	3%
20 - 22	7	5%
22 - 24	7	5%
24 - 26	115	86%

Chart Title: 86% of age 24 - 26 from Research & Development dept left the company

Chart Title formular:

=TEXT(J68,"0%") &" of age " & H68&" from "& A74&" dept left the company"

% value formular:

=XLOOKUP(J65,$J$65:$J$68,($K$65:$K$68)/$H$71)

Insights:

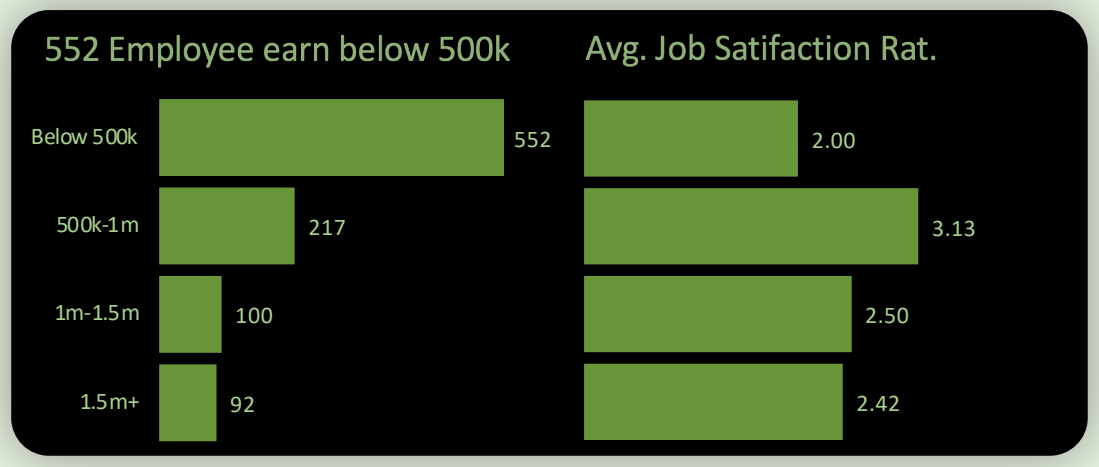
- Young professionals in R&D are leaving at alarming rates, possibly due to limited growth or lack of engagement.
- The age group 24–26 is most vulnerable, suggesting onboarding or early-career support gaps.

Question 4 & 5

Does low salary contribute to the Attrition rate?

What is the Average Job Satisfaction Ratings of those that left?

Salary Range	Attrition count	Avg of Leavers Satisfaction rating
Below 500k	552	2.4
500k-1m	217	2.5
1m-1.5m	100	3.1
1.5m+	92	2.0



Insights:

- Most leavers earn below ₦500K, indicating that lower salary bands face retention challenges.
- Those earning over ₦1M are the least likely to leave, reinforcing the idea that compensation matters.
- However, attrition still exists across all salary bands — pay is not the sole driver.
- No leaver reported a perfect satisfaction score, a clear sign of workplace dissatisfaction.
- Lower-paid employees (**below 500k**) make up the largest group leaving the company.
- the **highest satisfaction rating** is among those earning **1m–1.5m**, yet some still leave, implying **other factors besides pay** influence their decision (like career growth or culture)

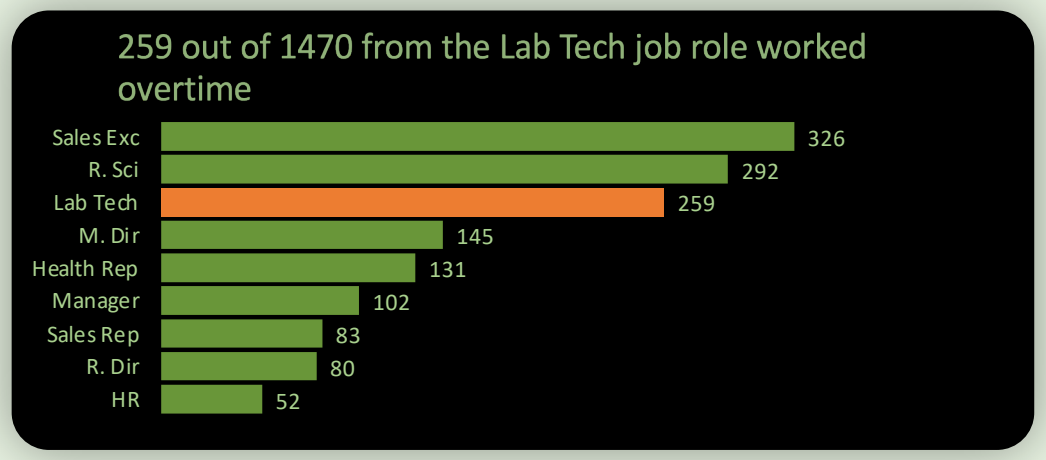
Question 6

Does low salary contribute to the Attrition rate?

What is the Average Job Satisfaction Ratings of those that left?

JobRole	OverTime Count	Highlight
HR	52	#N/A
R. Dir	80	#N/A
Sales Rep	83	#N/A
Manager	102	#N/A
Health Rep	131	#N/A
M. Dir	145	#N/A
Lab Tech	259	259
R. Sci	292	#N/A
Sales Exc	326	#N/A
Number	259	
Chart Title	259 out of 1470 from the Lab Tech job role worked overtime	

1. Chart Title formular:
=H44 & " out of " &E4&" from the " &job role& " job role worked overtime"
2. Highlight:
=IF(G34:G42=jobrole,H34:H42,NA())



Insights:

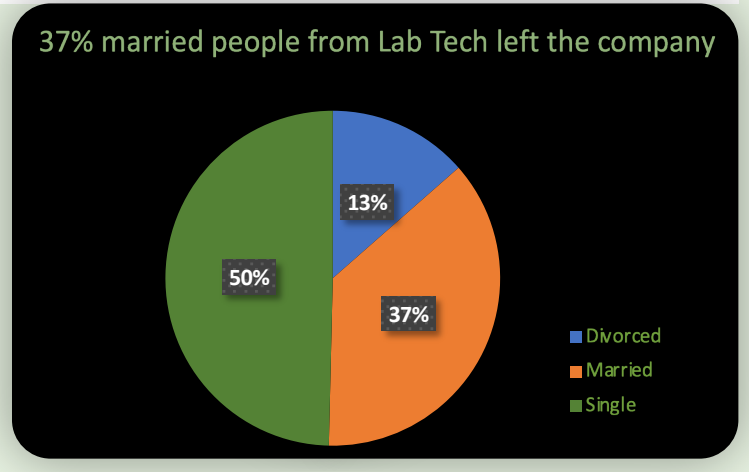
- Lab Techs doing overtime correlate directly with high attrition, potential burnout.
- Sales roles and Support Staff also show overtime pressure.
- Overworking may be linked with dissatisfaction and eventual exits.

Question 7

Show me the Marital Status % by Attrition

Marital Status	Count of Job	% in a pie chart
Divorced	18	49
Married	49	133
Single	66	179
	133	360
% value of Married		37%
Chart Title		37% married people from Lab Tech left the company

1. Chart Title formular:
=TEXT(K88,"0%")&" married people from "& jobrole &" left the company"
2. % Value of Married:
=XLOOKUP(I83,I82:I84,(K82:K84/$K$87))



Insights:

- Married employees may have additional stressors affecting their work-life balance
- A significant number of single employees also left, showing attrition is not strictly tied to marital status.
- Lab Tech role shows high attrition regardless of status, deeper job role issues may be the root cause.

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HeadCount
1,470
Stayers Vs. Leavers %

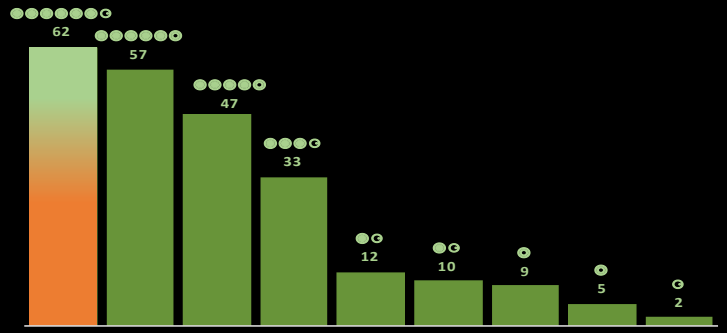
Attrition Count
237
Female Vs. Male

Avg. Monthly Salary
₦650,293
Sal > Avg Vs. Sal < Avg

Avg. Yrs at the Company
7.01
Stayers Vs. Leavers %

Avg. Dist from home
9.19
Dist > Avg Vs. Dist < Avg

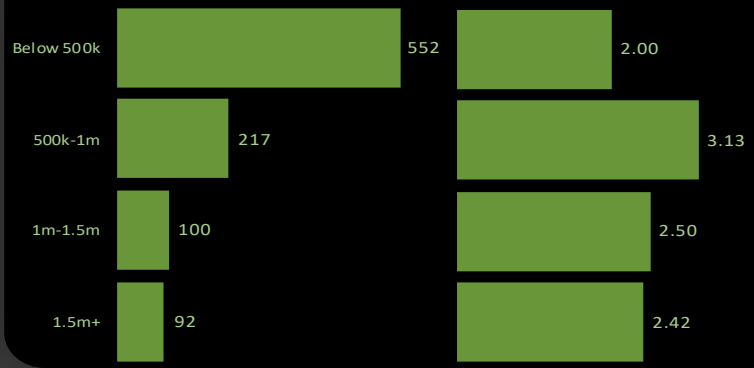
26.2% of leavers are Lab Tech



86% of age 24 - 26 from Research & Development dept left the company

552 Employee earn below 500k

Avg. Job Satifaction Rat.



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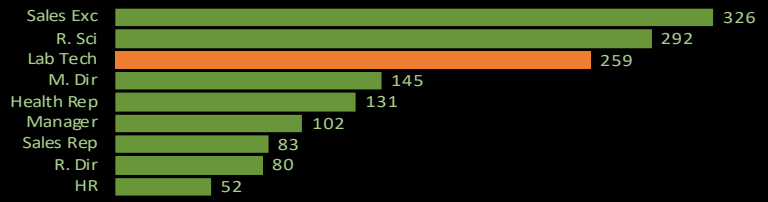
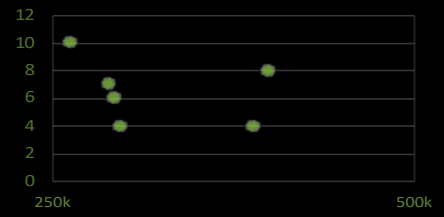
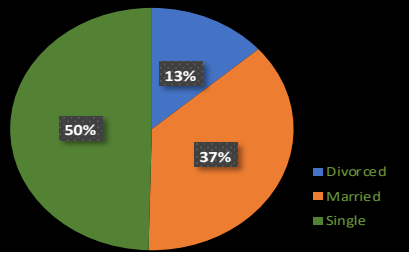


Filter Space

Salary vs. Dist from home



50% single people from Lab Tech left the company



CONCLUSION & RECOMMENDATION

Conclusion

- **Lab Technicians** showed the highest attrition.
- Employees aged **24–26** were most likely to leave.
- **Sales Executives** worked more overtime than other roles.
- Employees living farther away tended to earn below ₦500,000.
- Overtime, low satisfaction, and low pay are consistent contributors to exits.
- Strategic intervention is needed, particularly for early-career employees and those in technical roles.

Recommendations

- Target Lab Techs and Sales Staff with tailored retention programs (mentorship, better hours, career growth).
- Improve onboarding and engagement for employees aged 24–26.
- Address overtime stress through shift management and workload balancing.
- Use pulse surveys to track job satisfaction regularly and respond proactively.