

Specialization: **Dashboard Development**

Business Focus: **HR**

Tool: **Tableau**

# Workforce Dashboard: Salary, Attrition & Forecasting – By Akunna Dove

## Project Learning Opportunities

*This project provides practical experience in designing a professional Tableau dashboard using real-world HR data from Yellow. You'll explore the use of bar charts, line graphs, donut charts, scorecards, and other visualization tools to build an interactive dashboard that transforms raw data into meaningful insights for strategic decision-making in HR and workforce management.*

## Tools and Technology to be Used



## Case Study Overview

### About the Company

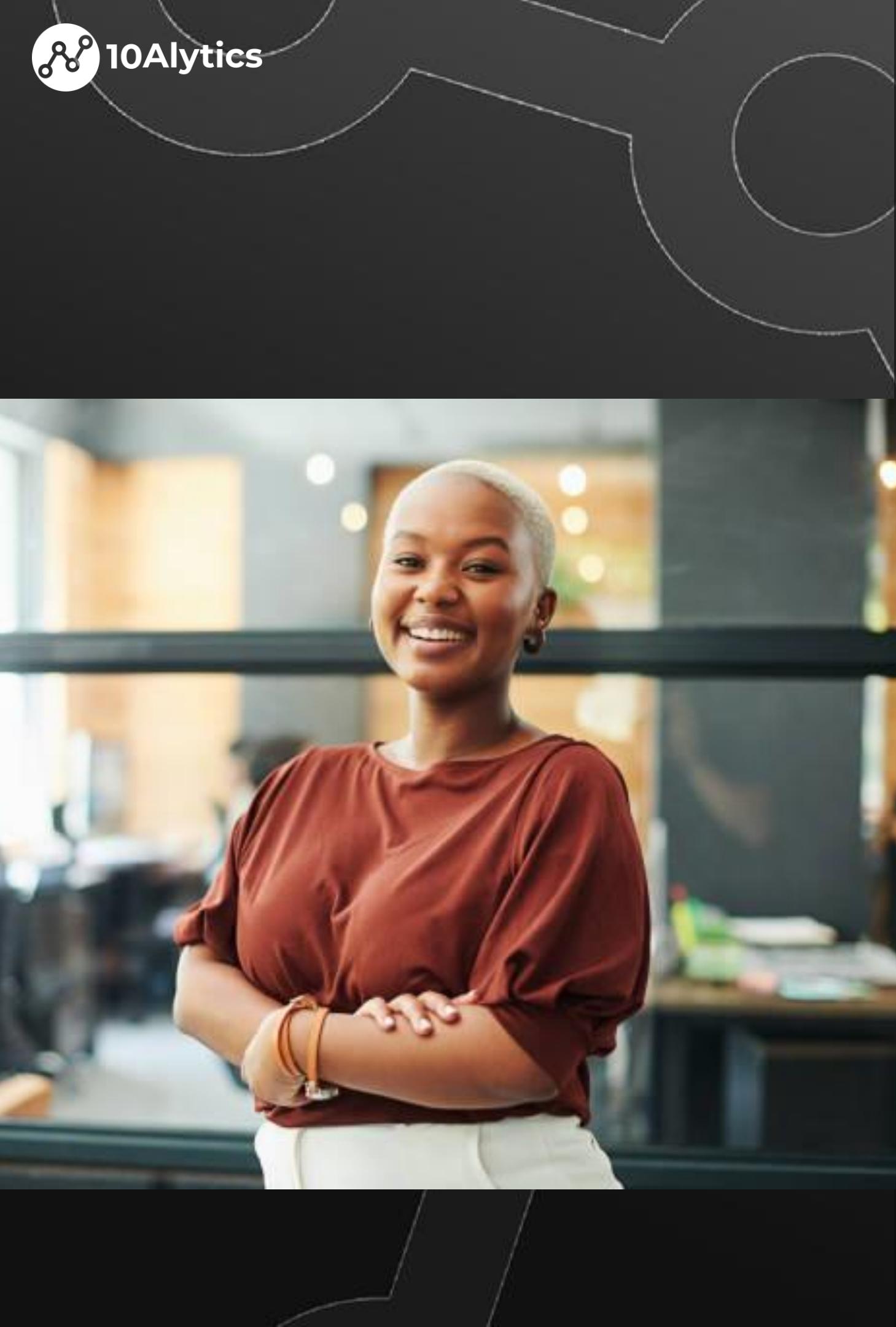
- Yellow is a mid-sized company with a diverse workforce across departments like Sales, Research & Development (R&D), and Human Resources. Employees vary in roles, educational backgrounds, and career paths. To support effective strategic planning, Yellow aims to analyze salary trends, workforce demographics, and retention patterns. By leveraging data-driven insights, the company seeks to improve decisions related to compensation, training, and employee retention.



# Case Study Overview

## Problem Statement

- Yellow requires an in-depth analysis of employee income trends and workforce demographics to enhance financial planning and retention strategies. Major challenges include identifying salary distribution patterns, predicting income trends, and examining how factors such as age, job role, and department influence earnings. Through data visualization in Tableau, Yellow aims to uncover actionable insights into salary dynamics and workforce composition



## Aims of the Project:

- Forecast Attrition Trends.
- To identify key performance indicators (KPIs) such as average monthly income and Attrition rate.
- Analyze Monthly Income Distribution by Age and Job Role.
- Compare Salary Distribution Across Employees.



# Data Description

Attrition	Business Travel Frequency	CF_age band	CF_attrition	Department	Education	emp_no	Employee	Gender	Job Role	Marital Status	Over Time	Over18
Yes	Travel_Rarely	35 - 44	Ex-Employees	Sales	Life Sciences	STAFF-1	1	Female	Sales Exec	Single	Yes	Y
No	Travel_Frequent	45 - 54	Current Employees	R&D	Life Sciences	STAFF-2	2	Male	Research	Married	No	Y
Yes	Travel_Rarely	35 - 44	Ex-Employees	R&D	Other	STAFF-4	4	Male	Laboratory	Single	Yes	Y
No	Travel_Frequent	25 - 34	Current Employees	R&D	Life Sciences	STAFF-5	5	Female	Research	Married	Yes	Y
No	Travel_Rarely	25 - 34	Current Employees	R&D	Medical	STAFF-7	7	Male	Laboratory	Married	No	Y
No	Travel_Frequent	25 - 34	Current Employees	R&D	Life Sciences	STAFF-8	8	Male	Laboratory	Single	No	Y
No	Travel_Rarely	Over 55	Current Employees	R&D	Medical	STAFF-10	10	Female	Laboratory	Married	Yes	Y
No	Travel_Rarely	25 - 34	Current Employees	R&D	Life Sciences	STAFF-11	11	Male	Laboratory	Divorced	No	Y
No	Travel_Frequent	35 - 44	Current Employees	R&D	Life Sciences	STAFF-12	12	Male	Manufacturing	Single	No	Y
No	Travel_Rarely	35 - 44	Current Employees	R&D	Medical	STAFF-13	13	Male	Healthcare	Married	No	Y
No	Travel_Rarely	35 - 44	Current Employees	R&D	Medical	STAFF-14	14	Male	Laboratory	Married	No	Y
No	Travel_Frequent	25 - 34	Current Employees	R&D	Life Sciences	STAFF-15	15	Female	Laboratory	Single	Yes	Y
No	Travel_Rarely	25 - 34	Current Employees	R&D	Life Sciences	STAFF-16	16	Male	Research	Divorced	No	Y
No	Travel_Rarely	25 - 34	Current Employees	R&D	Medical	STAFF-18	18	Male	Laboratory	Divorced	No	Y
Yes	Travel_Rarely	25 - 34	Ex-Employees	R&D	Life Sciences	STAFF-19	19	Male	Laboratory	Single	Yes	Y
No	Travel_Rarely	25 - 34	Current Employees	R&D	Life Sciences	STAFF-20	20	Female	Manufacturing	Divorced	No	Y
No	Travel_Rarely	25 - 34	Current Employees	R&D	Life Sciences	STAFF-21	21	Male	Research	Divorced	Yes	Y
No	Non-Traveler	Under 25	Current Employees	R&D	Medical	STAFF-22	22	Male	Laboratory	Divorced	Yes	Y
No	Travel_Rarely	45 - 54	Current Employees	Sales	Life Sciences	STAFF-23	23	Female	Manager	Married	No	Y
No	Travel_Rarely	35 - 44	Current Employees	R&D	Life Sciences	STAFF-24	24	Male	Research	Single	Yes	Y
No	Non-Traveler	Under 25	Current Employees	R&D	Other	STAFF-26	26	Female	Manufacturing	Divorced	No	Y
Yes	Travel_Rarely	35 - 44	Ex-Employees	Sales	Life Sciences	STAFF-27	27	Male	Sales Rep	Single	No	Y
No	Travel_Rarely	25 - 34	Current Employees	R&D	Life Sciences	STAFF-28	28	Female	Research	Single	No	Y

# Data Description

Training	Age	CF_curren	Daily Rate	Distance	Education	Employee	Environment	Hourly Ra	Job Involv	Job Level	Job Satisf	Monthly	Monthly	Emp no
0	41	0	1102	1	Associate	1	2	94	3	2	4	5993	19479	STAFF-1
3	49	1	279	8	High Scho	1	3	61	2	2	2	5130	24907	STAFF-2
3	37	0	1373	2	Associate	1	4	92	2	1	3	2090	2396	STAFF-4
3	33	1	1392	3	Master's	1	4	56	3	1	3	2909	23159	STAFF-5
3	27	1	591	2	High Scho	1	1	40	3	1	2	3468	16632	STAFF-7
2	32	1	1005	2	Associate	1	4	79	3	1	4	3068	11864	STAFF-8
3	59	1	1324	3	Bachelor's	1	3	81	4	1	1	2670	9964	STAFF-10
2	30	1	1358	24	High Scho	1	4	67	3	1	3	2693	13335	STAFF-11
2	38	1	216	23	Bachelor's	1	4	44	2	3	3	9526	8787	STAFF-12
3	36	1	1299	27	Bachelor's	1	3	94	3	2	3	5237	16577	STAFF-13
5	35	1	809	16	Bachelor's	1	1	84	4	1	2	2426	16479	STAFF-14
3	29	1	153	15	Associate	1	4	49	2	2	3	4193	12682	STAFF-15
1	31	1	670	26	High Scho	1	1	31	3	1	3	2911	15170	STAFF-16
2	34	1	1346	19	Associate	1	2	93	3	1	4	2661	8758	STAFF-18
4	28	0	103	24	Bachelor's	1	3	50	2	1	3	2028	12947	STAFF-19
1	29	1	1389	21	Master's	1	2	51	4	3	1	9980	10195	STAFF-20
5	32	1	334	5	Associate	1	1	80	4	1	2	3298	15053	STAFF-21
2	22	1	1123	16	Associate	1	4	96	4	1	4	2935	7324	STAFF-22
3	53	1	1219	2	Master's	1	1	78	2	4	4	15427	22021	STAFF-23
3	38	1	371	2	Bachelor's	1	4	45	3	1	4	3944	4306	STAFF-24
5	24	1	673	11	Associate	1	1	96	4	2	3	4011	8232	STAFF-26
4	36	0	1218	9	Master's	1	3	82	2	1	1	3407	6986	STAFF-27
4	34	1	419	7	Master's	1	1	53	3	3	2	11994	21293	STAFF-28

# Data Description

emp no	Num Comp	Percent Sa	Performan	Relations	Standard H	Stock Opti	Total Wor	Work Life	Years At C	Years In C	Years Since	Years With Curr Manager	Date
STAFF-1	8	11	3	1	80	0	8	1	6	4	0	5	2/5/2020
STAFF-2	1	23	4	4	80	1	10	3	10	7	1	7	2/6/2020
STAFF-4	6	15	3	2	80	0	7	3	0	0	0	0	2/7/2020
STAFF-5	1	11	3	3	80	0	8	3	8	7	3	0	2/8/2020
STAFF-7	9	12	3	4	80	1	6	3	2	2	2	2	2/9/2020
STAFF-8	0	13	3	3	80	0	8	2	7	7	3	6	2/10/2020
STAFF-10	4	20	4	1	80	3	12	2	1	0	0	0	2/11/2020
STAFF-11	1	22	4	2	80	1	1	3	1	0	0	0	2/12/2020
STAFF-12	0	21	4	2	80	0	10	3	9	7	1	8	2/13/2020
STAFF-13	6	13	3	2	80	2	17	2	7	7	7	7	2/14/2020
STAFF-14	0	13	3	3	80	1	6	3	5	4	0	3	2/15/2020
STAFF-15	0	12	3	4	80	0	10	3	9	5	0	8	2/16/2020
STAFF-16	1	17	3	4	80	1	5	2	5	2	4	3	2/17/2020
STAFF-18	0	11	3	3	80	1	3	3	2	2	1	2	2/18/2020
STAFF-19	5	14	3	2	80	0	6	3	4	2	0	3	2/19/2020
STAFF-20	1	11	3	3	80	1	10	3	10	9	8	8	2/20/2020
STAFF-21	0	12	3	4	80	2	7	2	6	2	0	5	2/21/2020
STAFF-22	1	13	3	2	80	2	1	2	1	0	0	0	2/22/2020
STAFF-23	2	16	3	3	80	0	31	3	25	8	3	7	2/23/2020
STAFF-24	5	11	3	3	80	0	6	3	3	2	1	2	2/24/2020
STAFF-26	0	18	3	4	80	1	5	2	4	2	1	3	2/25/2020
STAFF-27	7	23	4	2	80	0	10	3	5	3	0	3	2/26/2020
STAFF-28	0	11	3	3	80	0	13	3	12	6	2	11	2/27/2020

## Project Workflow



STEP 1

 Join Tables

STEP 2

 Chart Creation

STEP 3

 Dashboard  
Development (Tableau)

STEP 4

 Presentation

STEP 5

*Share!!!*



# HR Analytics Dashboard



Attrition Rate

**16%**

Attrition Count

**237**

Total Monthly Income

**\$9,559K**

Average Monthly Income

**\$6.5K**

Employee Count

**1.5K**

Average Years at Company

**7.0**

## Demographics

Gender Distribution

Female



Male

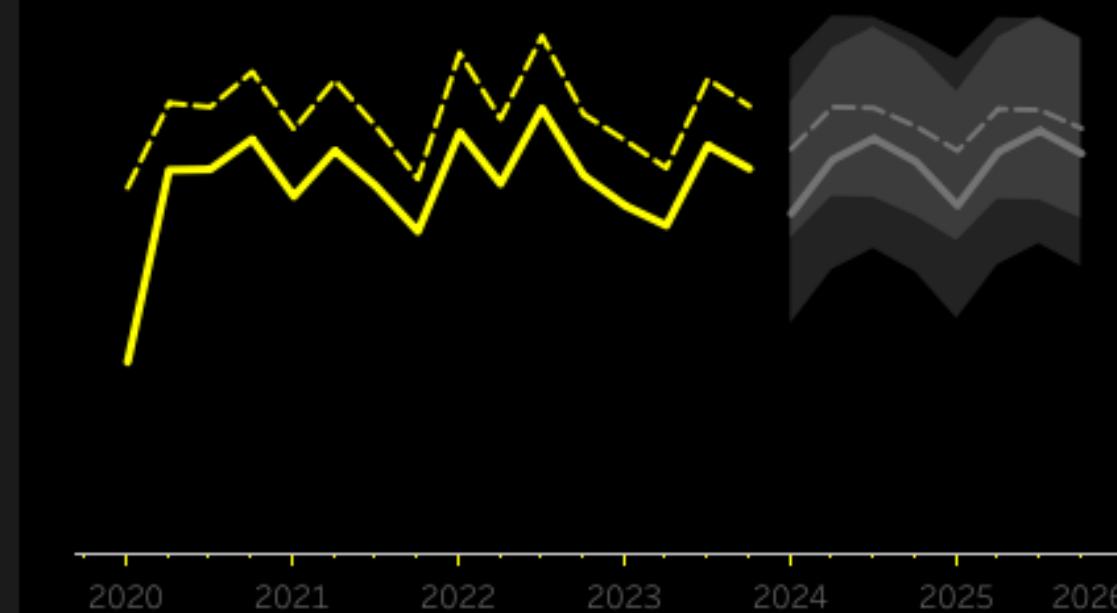


Age Distribution - Income

25 - 34    35 - 44    45 - 54    Over 55    Under 25

## Income and Attrition Trends

Monthly Income Over Time

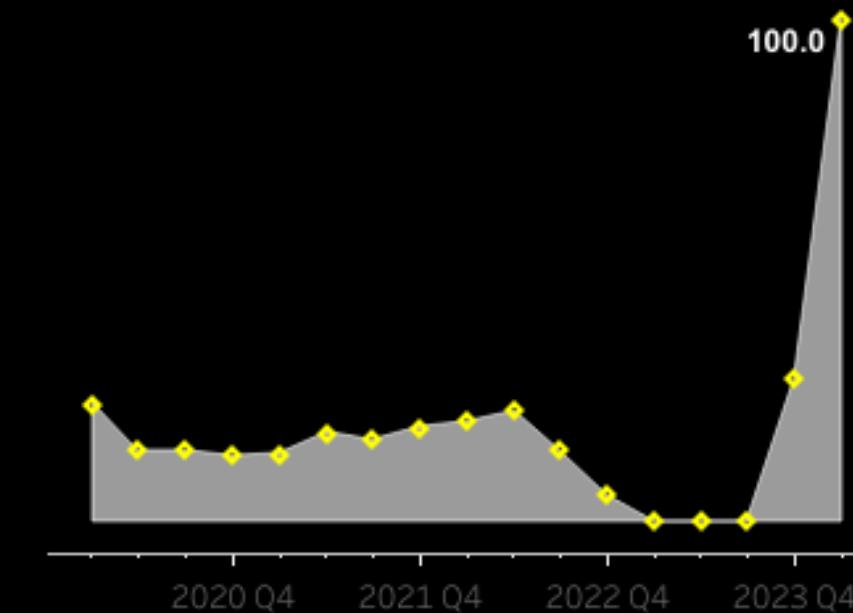


Forecast

Actual

Estimate

Attrition Rate Over Time

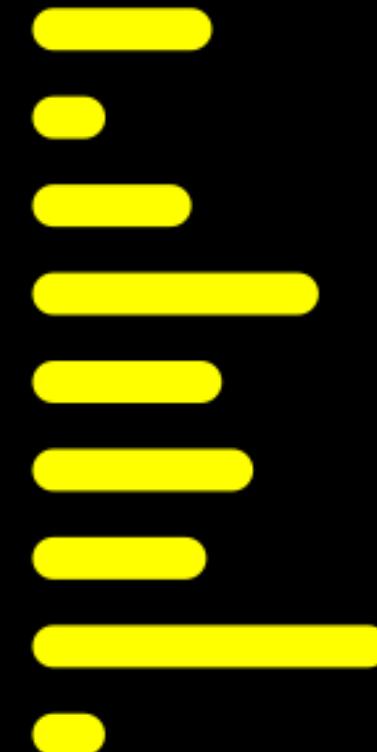


## Job Role - Department

Attrition Rate



Monthly Income



## Department-Wise Summary

Department	Attrition Count	Attrition Rate	Avg. Monthly Income	Avg. Years At Company
HR	63	19	6.7K	7.2
R&D	961	14	6.3K	6.9
Sales	446	21	7.0K	7.3

# READY TO DELVE IN?

