HR ANALYTICS REPORT

Data Literacy with Tableau

TEAM ID

   NM2023TMID16227

MEMBERS

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PROJECT TITTLE

   HR ANALYTICS WITH TABLEAU

PAPER TITTLE

   DATA LITERACY WITH TABLEAU

DETAILS

   III YEAR,
   B.Sc. MATHEMATICS,
   PG & RESEARCH DEPARTENT OF MATHEMATICS,
   KALAIGNAR KARUNANIDHI GOVERNMENT ARTS COLLEGE,
   TIRUVANNAMALAI.

UNIVERSITY AFFLIATED

   THIRUVALLUVAR UNIVERSITY, VELLORE.

We have used Mural for defining our problem and then aided this with Tableau application for proposing solutions on the predefined data set available.

The Tableau HR Scorecard is a framework designed to measure and evaluate the success of talent management strategies within an organization. It provides a way for HR professionals and business leaders to track and analyze key performance indicators (KPIs) related to workforce planning, recruitment, retention, and development.

We have used Tableau for creating different visualization so as to analysis easier. This includes pie chart, donut chart, lollipop chart, bar graphs and tabulations.

Different visualizations

1. **KPI**
2. **Department wise Attrition**
3. **No. Of employee by Age Group**
4. **Job satisfaction Rating**
5. **Education field wise Attrition**

1.2 Purpose

Human Resource (HR) analysis is a data-driven approach to measure and improve the performance, engagement, and productivity of an organization's workforce. HR analysis involves the collection and analysis of employee or human resource data, also known ass HR metrics. The data collected can be used to make personnel decisions, restructure company policies, and make more data-driven decisions for the company.
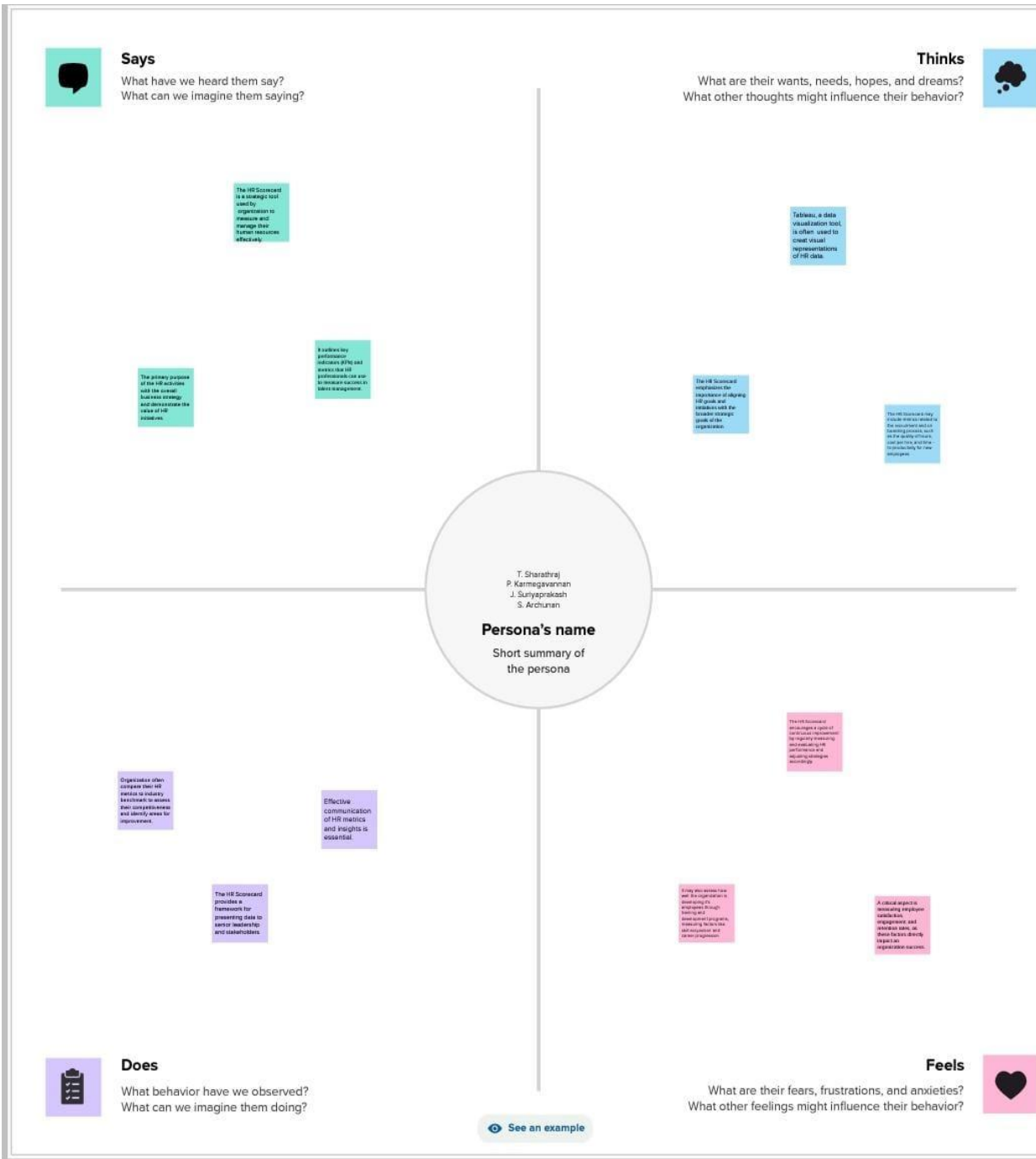
The importance of HR analysis lies in its ability to provide insights so that HR leaders can make better decisions and improve human resource management. HR metrics are essential for improving HR practices. By using analytics, businesses can improve even one variable, which can trigger a chain reaction of benefits. The benefit of using metrics is that the decisins are better-informed and backed by facts-rather than hunches-and thus make key people decisions far more 'sellable' to the business.

HR analytics came to be in the hope that businesses could improve internal processes that relate to functions such as payroll, benefits, hiring, employee onboarding, employee performance, and overall employee morale. It is the best way to use data to forge an understanding of how well a business is performing. Businesses track HR metrics to measure and improve performance, engagement, and productivity. Small business HR teams can track metrics for all workforce processes. This includes hiring, pay, time and labor, training, engagement, and retention. Common HR metrics include time-to-hire, time-to-productivity, and
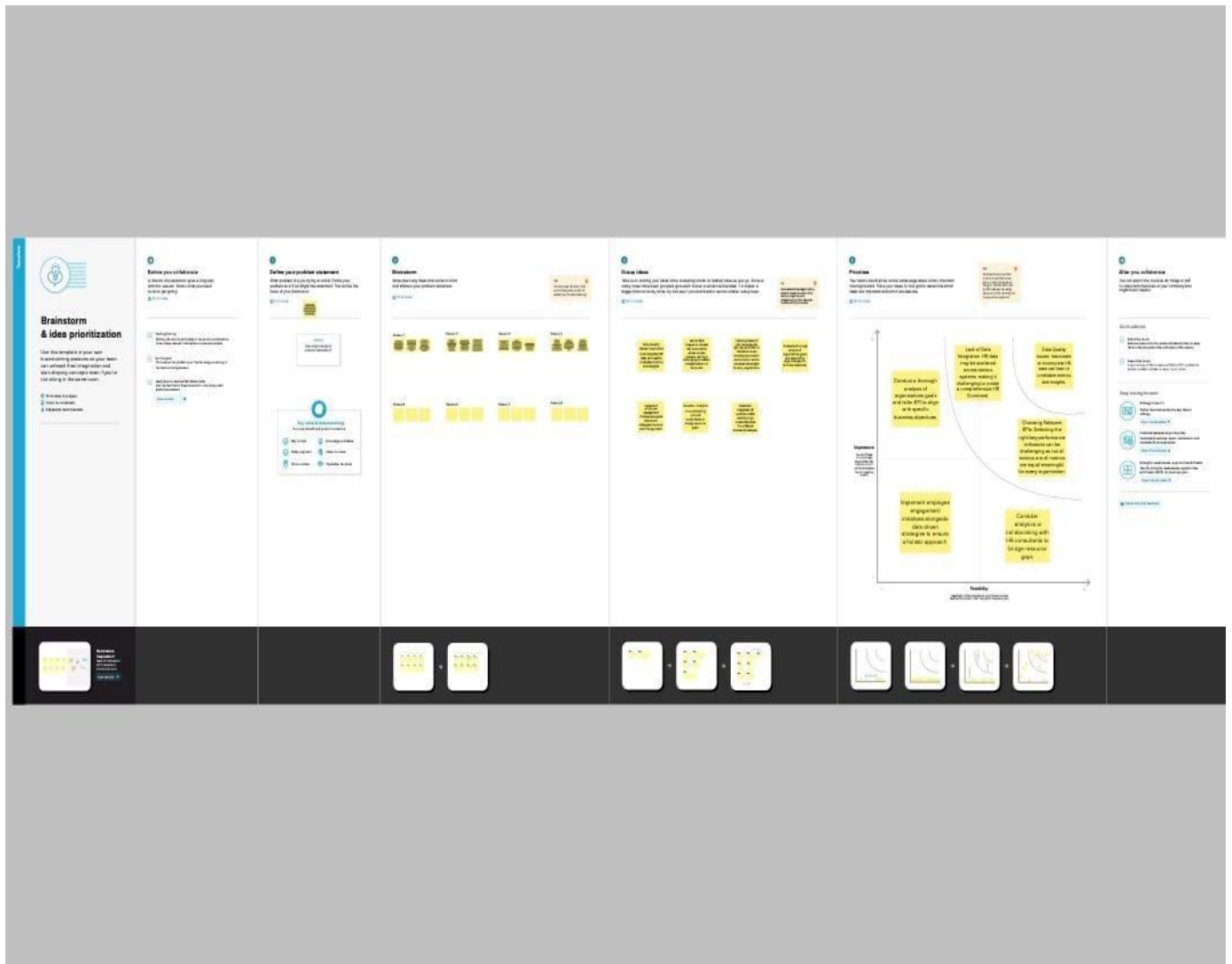
employee turnover rate, absenteeism or absence rate, and overtime ratio, revenue per employee, diversity and inclusion.

2 – Problem Definition & Design Thinking

2.1 Empathy Map

Says — What have we heard them say? What can we imagine them saying?

- The HR Scorecard is a strategic tool used by organization to measure and manage their human resources effectively
- The primary purpose of the HR activities with the overall business strategy and demonstrate the value of HR initiatives.
- It outlines key performance indicators (KPIs) and metrics that HR professionals can use to measure success in talent management.

Thinks — What are their wants, needs, hopes, and dreams? What other thoughts might influence their behavior?

- Tableau, a data visualization tool, is often used to creat visual representations of HR data.
- The HR Scorecard emphasizes the importance of aligning HR goals and initiatives with the broader strategic goals of the organization.
- The HR Scorecard may include metrics related to the recruitment and/or hiring process, such as the quality of hours, cost per hire, and time to productivity for new employees.

Persona's name — Short summary of the persona

T. Sharathraj
P. Karmegavannan
J. Suriyaprakash
S. Archunan

Does — What behavior have we observed? What can we imagine them doing?

- Organization often compare their HR metrics to industry benchmark to assess their competitiveness and identify areas for improvement.
- Effective communication of HR metrics and insights is essential.
- The HR Scorecard provides a framework for presenting data to senior leadership and stakeholders

Feels — What are their fears, frustrations, and anxieties? What other feelings might influence their behavior?

- The HR Scorecard encourages a cycle of continuous improvement by regularly measuring and evaluating HR performance and adjusting strategies accordingly.
- It may also assess how well the organization is developing its employees through training and development programs, measuring factors like skill acquisition and career progression.
- A critical aspect is revealing employee satisfaction, engagement, and retention rates, as these factors directly impact an organization success.

See an example

# 2.2 Ideation and Brainstorming Map

3 – Result

HR analytics is the process of collecting and analyzing Human Resource (HR) data in order to improve an organization's workforce performance. The process

can also be referred to as talent analytics, people analytics, or even workforce analytics. This method of data analysis takes data that is routinely collected by HR and correlates it to HR and organizational objectives. Doing so provides measured evidence of how HR initiatives are contributing to the organization's goals and strategies.
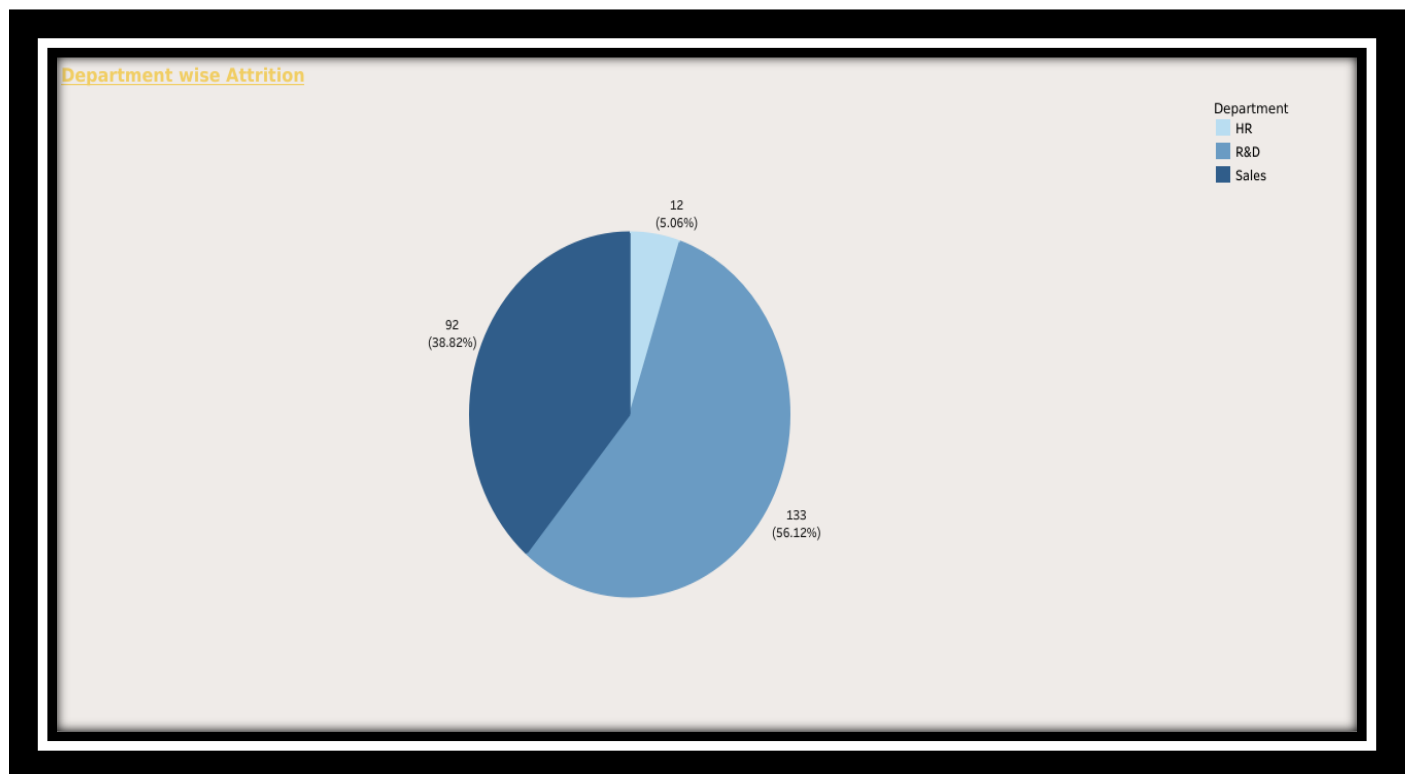
DEPARTMENT WISE ATTRITION
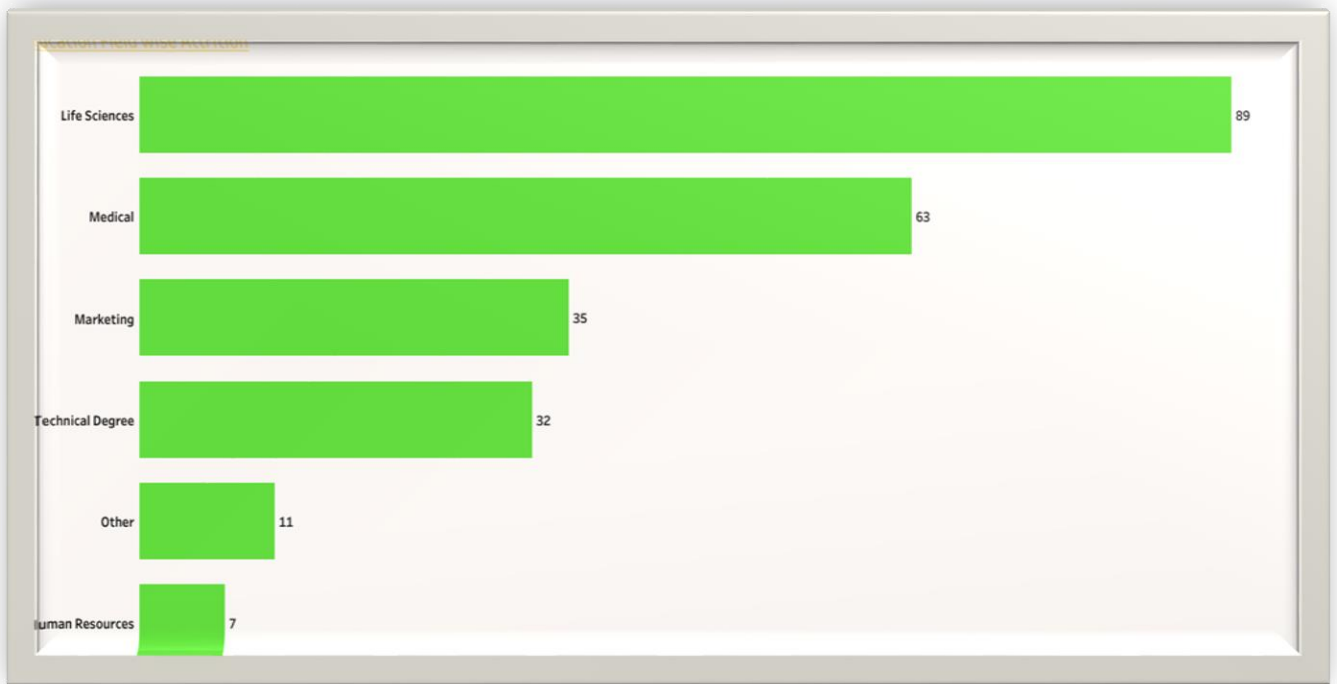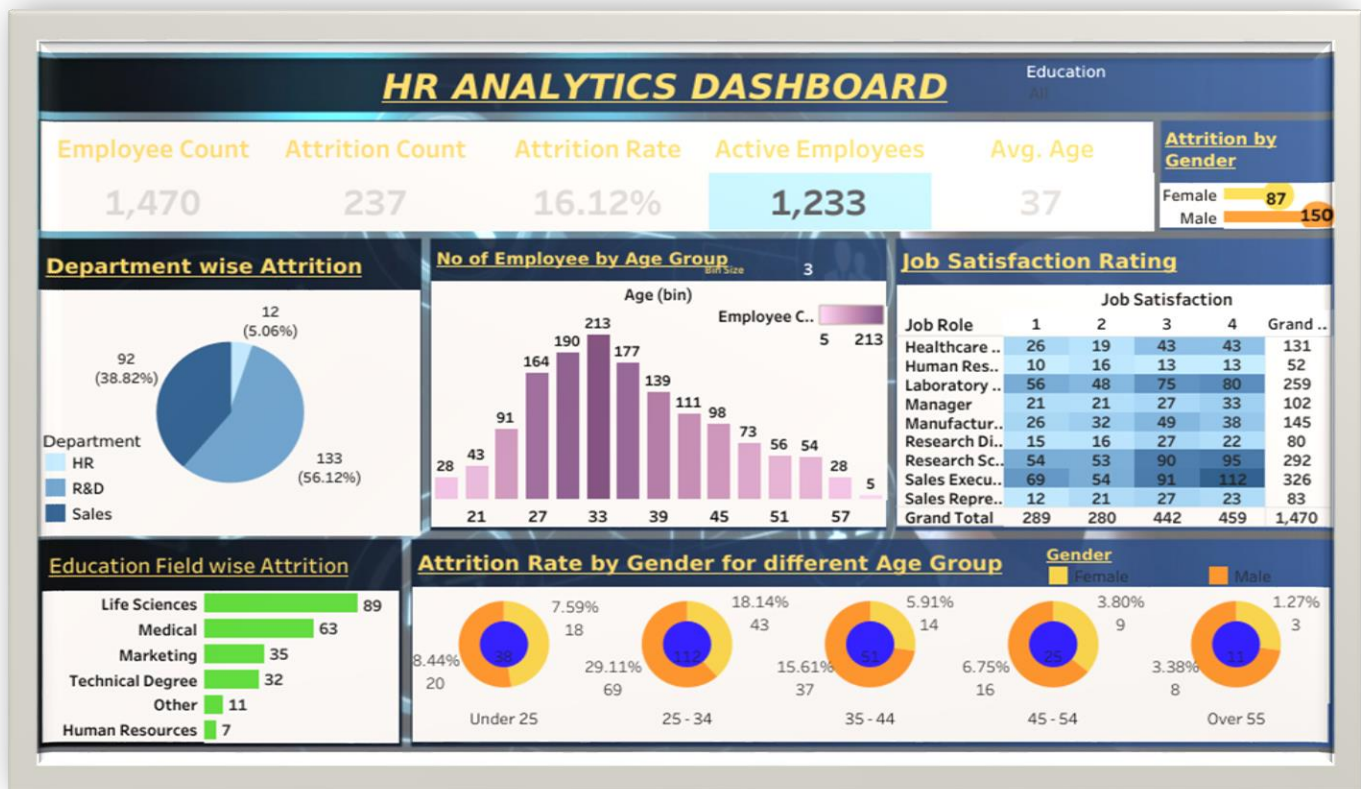
EDUCATION FIELD WISE ATTRITION

Job Role	Job Satisfaction 1	2	3	4	Grand Total
Healthcare Representative	26	19	43	43	131
Human Resources	10	16	13	13	52
Laboratory Technician	56	48	75	80	259
Manager	21	21	27	33	102
Manufacturing Director	26	32	49	38	145
Research Director	15	16	27	22	80
Research Scientist	54	53	90	95	292
Sales Executive	69	54	91	112	326
Sales Representative	12	21	27	23	83
Grand Total	289	280	442	459	1,470

Employee Count

JOB SATISFACTION RATING

NUMBER OF EMPLOYEES BY AGE GROUP

For example, if a software engineering firm has high employee turnover, the company is not operating at a fully productive level. It takes time and investment to bring employees up to a fully productive level. HR analytics provides data-backed insight on what is working well and what is not so that organizations can make improvements and plan more effectively for the future. As in the example above, knowing the cause of the firm's high turnover can provide valuable insight into how it might be reduced. By reducing the turnover, the company can increase its revenue and productivity.

HR ANALYTICS DASHBOARD

Education
All

Employee Count	Attrition Count	Attrition Rate	Active Employees	Avg. Age	Attrition by Gender
1,470	237	16.12%	1,233	37	Female 87 / Male 150

Department wise Attrition

12 (5.06%)
92 (38.82%)
133 (56.12%)

Department
- HR
- R&D
- Sales

No of Employee by Age Group

Bin Size 3

Age (bin)

Employee C.. 5 213

213, 190, 177, 164, 139, 111, 98, 91, 73, 56, 54, 43, 28, 28, 5

21 27 33 39 45 51 57

Job Satisfaction Rating

Job Satisfaction

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Education Field wise Attrition

Life Sciences	89
Medical	63
Marketing	35
Technical Degree	32
Other	11
Human Resources	7

Attrition Rate by Gender for different Age Group

Gender
- Female
- Male

Under 25: 7.59% 18 / 8.44% 20
25 - 34: 18.14% 43 / 29.11% 69
35 - 44: 5.91% 14 / 15.61% 37
45 - 54: 3.80% 9 / 6.75% 16
Over 55: 1.27% 3 / 3.38% 8

HR ANALYTCS DASHBOARD

HR metrics are essential for improving HR practices. By using analytics, businesses can improve even one variable, which can trigger a chain reaction of benefits.   Common HR metrics include time-to-hire, cost-per-hire, time-to-productivity, and employee turnover rate, absenteeism or absence rate, and overtime ratio, revenue per employee, diversity and inclusion.
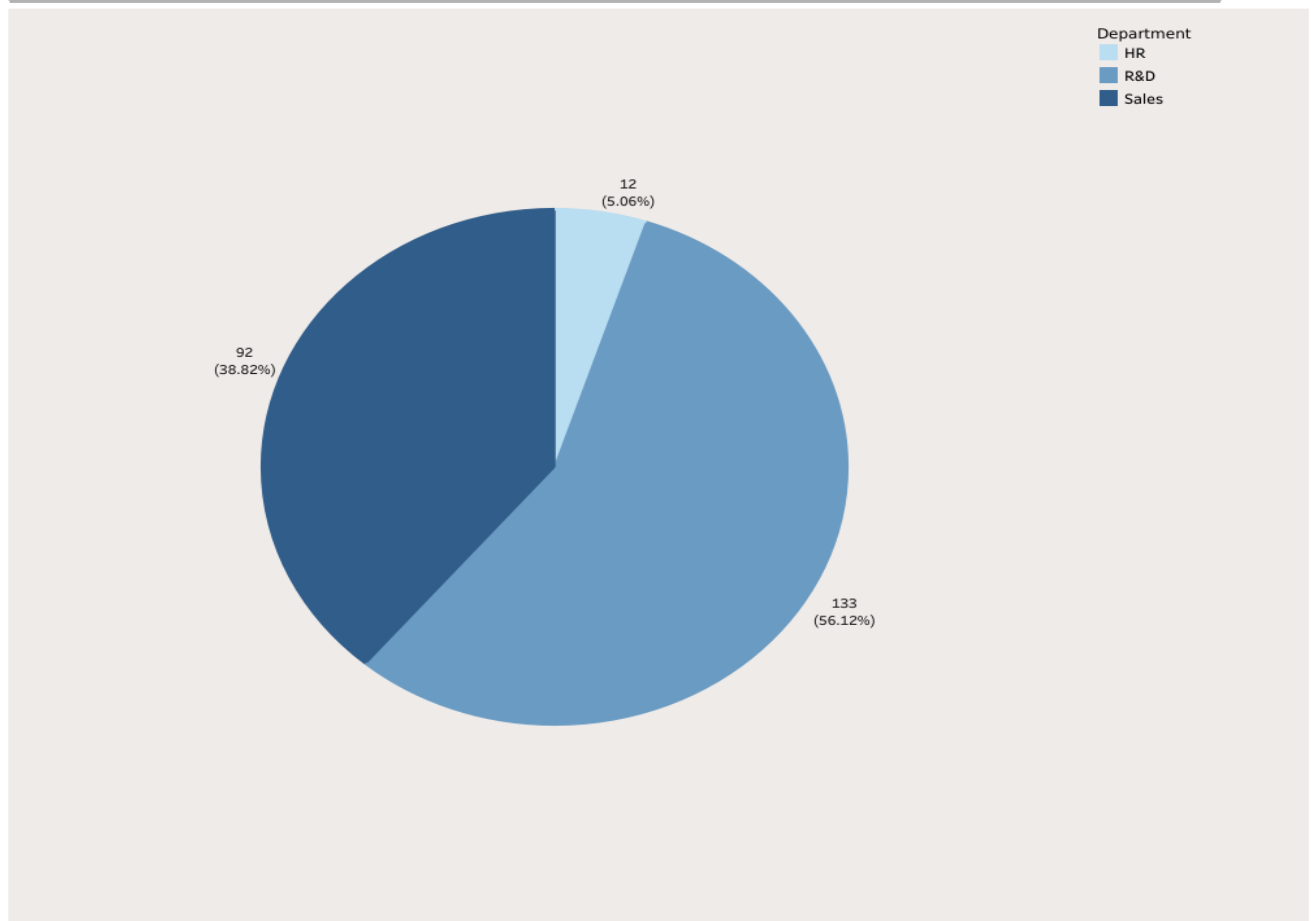
HR Analytics Storyline
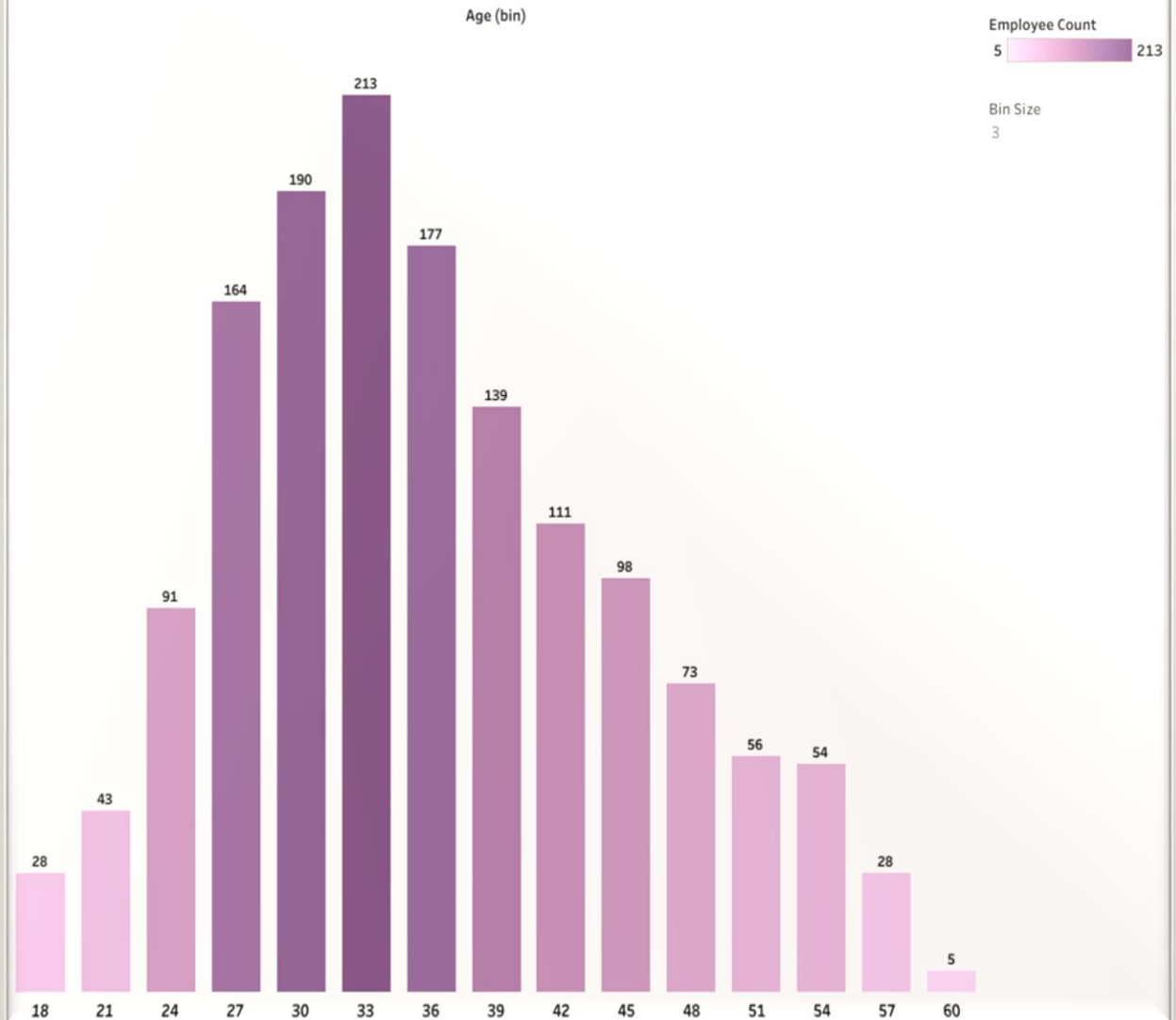
R&D Department has the highest no. of attrition rate i.e. 56.12% as compared to other departments.	The highest no. of employees i.e. 213 are employed at the age of 33.	Employees are expected to be satisfied in sales executive job role.	Most if the attrition accurs in the field of Life Sciences.	Male are expected to leave the organisation over the age of 55.

Department
- HR
- R&D
- Sales

12
(5.06%)

92
(38.82%)

133
(56.12%)

From this department wise attrition chart, it is clear that Research and Development I.e., R&D has higher rate of about 56.12%

HR Analytics Storyline

Age (bin)

Employee Count
5 — 213

Bin Size
3

Age (bin)	18	21	24	27	30	33	36	39	42	45	48	51	54	57	60
Count	28	43	91	164	190	213	177	139	111	98	73	56	54	28	5

From the representation of employees by age group, maximum is at the age of 32-34 of about 213 ane least is 60 years and 5 employees is at the band.

1

HR Analytics Storyline

R D Department has the highest no. of attrition rate e 56.12% as compared t...

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Job Role	Job Satisfaction				Grand Total
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Employee Count 10 — 112

112 employees from Sales executive role rated 4 by their satisfaction, 80 Laboratory Technicians follow the list while 69 Sales executive rate 1 for job satisfaction.
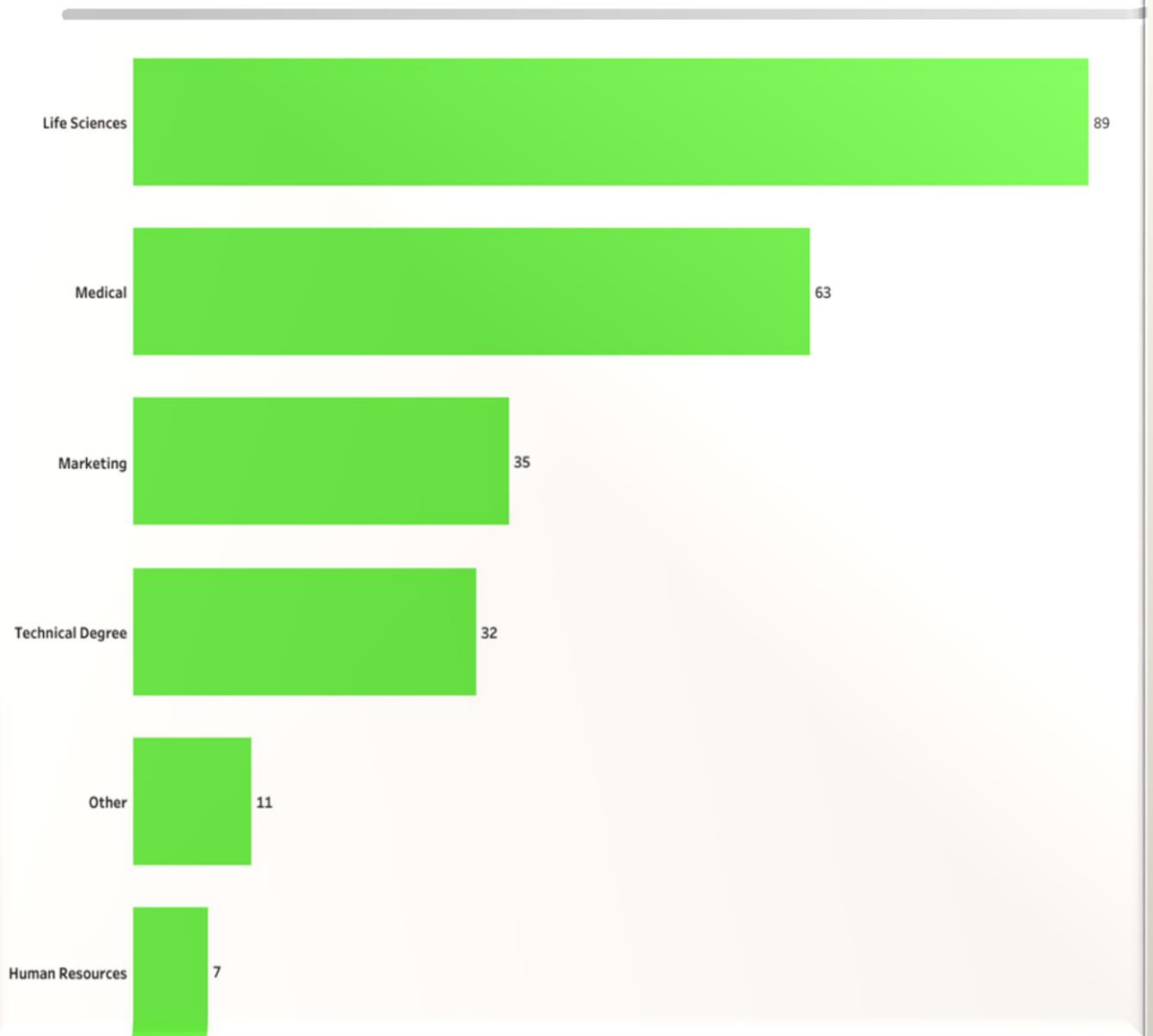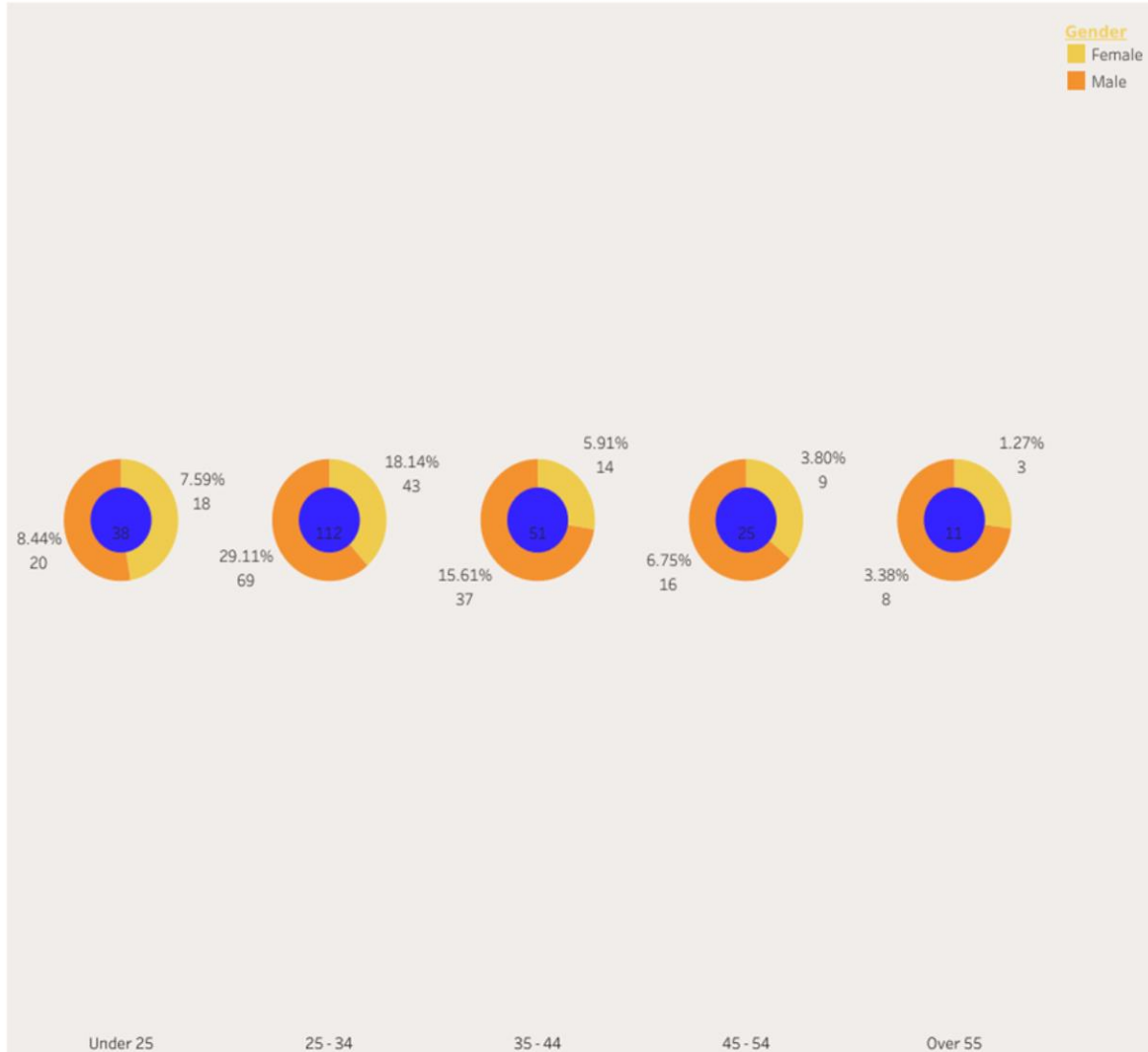
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Field	Value
Life Sciences	89
Medical	63
Marketing	35
Technical Degree	32
Other	11
Human Resources	7

89 employees are from Life Sciences background, Medical science scores second with 63 employees while 7 are from Human Resource background.

HR Analytics Storyline

Gender
- Female
- Male

8.44% 20 · 7.59% 18 · 38 (Under 25)

29.11% 69 · 18.14% 43 · 112 (25 - 34)

15.61% 37 · 5.91% 14 · 51 (35 - 44)

6.75% 16 · 3.80% 9 · 25 (45 - 54)

3.38% 8 · 1.27% 3 · 11 (Over 55)

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

112 employees in 25-34 age groups are attrited.

Design thinking is a problem - solving approach that involves empathizing with users to understand their needs, defining the problem statement, ideating solutions, prototyping solutions, and testing them with users. In the context of HR practices by empathizing with employees and understanding their needs. Once the problem statement is defined, ideation can begin on how to solve it. Prototyping solutions can help test out different ideas before implementing them in the organization.

4 – Advantages and Disadvantages

HR analytics provides several benefits to businesses. Here are some of the advantages of HR analytics:

1. Practicing evidence – based HR: Evidence-based HR centers on making d decisions supported by evidence from internal data, research findings and studies, expert judgement, real-life experience, values, and concerns.   This approach enables HR professionals to base HR decisions on facts and   evidence professionals to base HR decisions on facts and evidence rather   than relying solely on a gut feeling.

2. Improving recruitment and talent acquisition: By tracking data such as time-to-hire and cost-per-hire, businesses can gain valuable insights into their hiring process and make improvements to boost efficiency.

3. Managing employee performance and productivity: HR analytics can help businesses identify areas where employees need improvement and provide targeted training to improve performance.

4. Helping build equitable compensation and benefits packages: By analyzing compensation data across the organization, businesses can ensure that their compensation packages are fair and equitable.

5. Enabling effective workforce planning: By analyzing workforce data such as turnover rates and employee demographics, businesses can plan   for future workforce needs.

Here are some of the disadvantages of HR analytics:

1. Data privacy and security concerns: HR analytics involves handing sensitive employee data, which raises concerns about data privacy and security.

2. Reliance on data quality: The accuracy and reliability of HR analytics depend on the quality of the underlying data.

3. Potential for bias: HR analytics can be biased if the data used is not representative or if the algorithms used to analyze the data are biased.

4. Access to quality data: Access to quality data can be problem for companies that do not have up-to-date systems.

5 - Applications

Here are some of the applications of HR analytics:

1. Recruitment and talent acquisition: HR analytics can help businesses identify the best sources for finding top talent and optimize their recruitment process.

2. Employee retention: By analyzing employe data such as turnover rates and exit interviews, businesses can identify the reasons why employees leave and take steps to improve retention.

3. Performance management: HR analytics can help businesses identify areas where employees need improvement and provide targeted training to improve performance.

4. Compensation management: By analyzing compensation data across the organization, businesses can ensure that their compensation packages are   fair and equitable.

5. Workforce planning: By analyzing workforce data such as turnover rates and employee demographics, businesses can plan for future workforce needs.

6 – Conclusion

Some findings

1. From this department wise attrition chat, it is clear that Research and Development I.e., R&D has higher rate of about 56.12%

2. From the representation of employees by age group, maximum is at the   age of 32-34 of about 213 and least is 60 years and 5 employees is at the   band.

3. 112 employees from Sales executive role rated 4 by their job satisfaction,   80 Laboratory Technicians follow the list while 69 Sales executive rate 1   for job satisfaction.

4. 89 employees are from Life Sciences background, Medical science scores second with 63 employees while 7 are from Human Resource background.

5. 112 employees in 25-344 age groups are attrited.

7 – Future Scope

Here are some of the predictions for the future of HR analytics:

1. Increased use of A1 and machine learning: The use of A1 and machine learning in HR analytics is expected to increase, allowing businesses to make more accurate predictions and data-driven decisions.

2. Greater emphasis on employee experience: HR analytics will focus more on employee experience, including employee engagement, satisfaction, and well-being.

3. More emphasis on diversity and inclusion: HR analytics will play a more significant role in promoting diversity and inclusion in the workplace.

4. Greater use of predictive analytics: Predictive analytics will become more prevalent in HR analytics, allowing businesses to predict future trends and make data-driven decisions accordingly.

5. Increased focus on skills development: HR analytics will play a more significant role in identifying skills gaps and developing training programs to address them.

These are just a few examples of how HR analytics is expected to evolve in the future. As technology continues to advance, we can expect HR analytics to become even more sophisticated and data - driven.

THANK YOU