

HR ANALYTICS USING IBM COGNOS

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1. INTRODUCTION

1.1 OVERVIEW

Project Title - HR ANALYTICS USING IBM COGNOS

A brief description about our project

- ▶ Analytics is the interpretation of data patterns that assist decision-making and performance improvement.
- ▶ Hr Analytics is defined as the process of measuring the impact of HR metrics,such as time to hire and retention rate on business performance.
- ▶ As per our project we will be analysing some important visualizations and creating a dashboard .
- ▶ This project is based on an understanding of the HR analytics dataset .It has 1470 data points(rows) and 36 features(columns) describing each HR analytics related details.

1.2 purpose

By the end of this project,we will :

- ▶ know fundamental concepts and can work on IBM Cognos Analytics.
- ▶ Gain a broad understanding of plotting different graphs.

- Able to create meaningful dashboards.

2.LITERATURE SURVEY

2.1 EXISTING PROBLEM

▸ HR analytics is a relatively new term which first appeared in the academic literature in 2004. Adding the 'HR 'component indicates that these analyses concern the people inside the organisation. Therefore ,HR analytics can be defined as a systematic identification and better decisions.

▸ In previously existing HR analytics cannot give recommendations at the end of recruitment process which reduces costs and time to employ staff by the accurate identification of the most qualified candidates.

▸ In personnel retention, it indicates hidden patterns to understand employee resignations using metrics such as employee satisfaction based on historical data from many years, machine learning techniques are often able to find factors affecting resignations which maybe difficult for managers to observe.

2.2 proposed solution

▸ In this we will be analysing the dataset by using IBM cognos Analytics which gives recommendations and provides data visualization charts.

► some of the data visualizations which are analysed through IBM Cognos:

- Analysing Age,Total working Years,Attrition,Years At Company and Monthly Income.

- Analysis of Attrition# By Job Role.

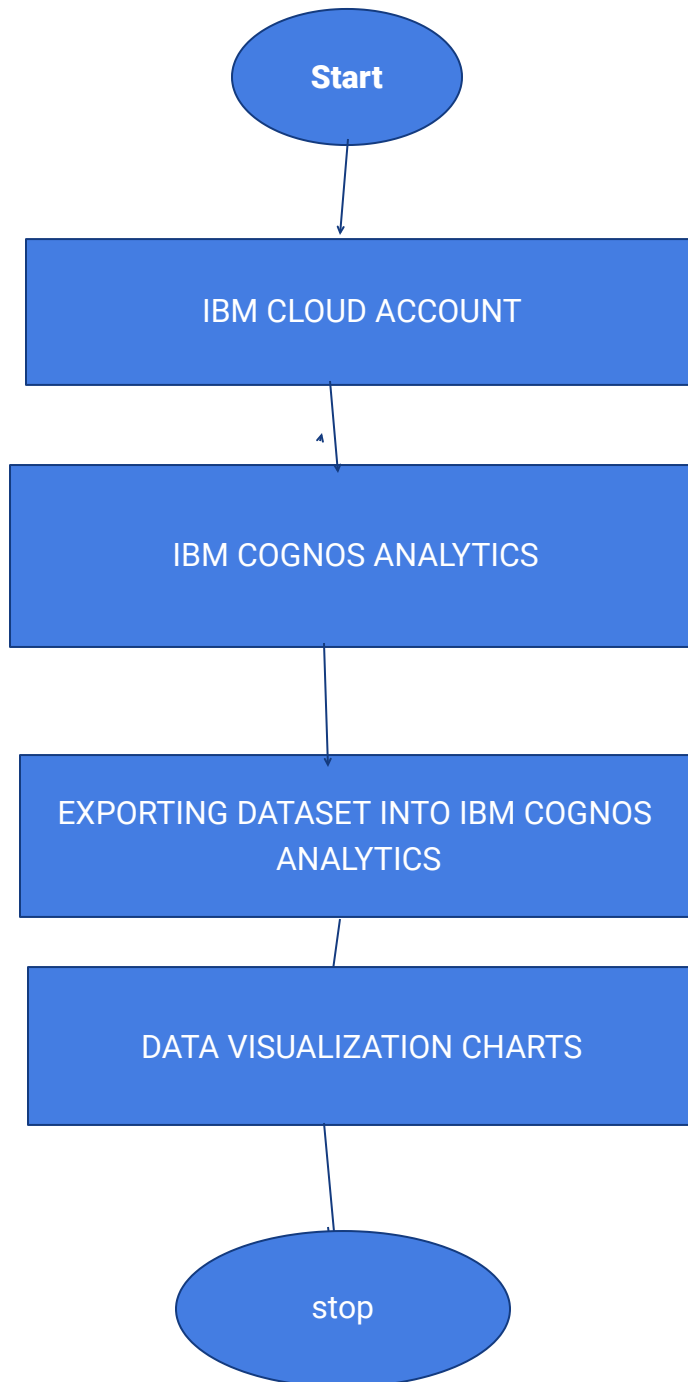
- Years In Current Role By Years Since Last Promotion Colored by Attrition.

- Attrition# For Years With Current Manager Hierarchy.

- Attrition# By No Of Companies Worked Colored By Job Role.

3.THEORITICAL ANALYSIS

3.1 BLOCK DIAGRAM :



3.2 HARDWARE/SOFTWARE DESIGNING:

software requirements :-

- ▶ IBM cognos analytics and github are the major software requirements.
- ▶ Cog nos Analytics is both a part of software and hardware environment.
- ▶ A single bottleneck in either the software or hardware has a ripple effect for the entire system. software product compatibility reports provide up to date information about the supported environments and minimum requirements for the product/data.
- ▶ Cog nos Analytics on premises 11.1.x
- ▶ Cog nos Analytics on Premises (11.1.7),(11.1.6),(11.1.5).....
- ▶ IBM COGNOS ANALYTICS is a software tool which is used in this project to create multiple graphs /visualisation charts.

Hardware requirements:-

- ▶ The hardware requirements depend on our IBM Cog nos environment. we may require additional resources, such as disk space.
- ▶ Requirement RAM with recommended: 4GB
- ▶ Note: Although it is possible to run controller using the minimum specifications, unless there are exceptional circumstances it is best to use at least the recommended specifications.

► Database for IBM Cognos Controller data must be one of the following types are:

- DB2

- Oracle

- Microsoft SQL Server

► Oracle client Database if are using Oracle client as database, the following components are the minimum requirements:

- Oracle Network Utilities

- Oracle Database Utilities

- SQL*Plus

- Oracle JDBC/OCI Interface

- Oracle Windowa Interface

Note: we must install both the 32-bit and 64 bit on the server.

► Database for financial analytics publisher requires DB2, Oracle, Microsoft SQL Server Web browser microsoft internet explorer.

► Microsoft Excel is required only to use the IBM Cognos Controller Link for Microsoft excel.

5.EXPERIMENTAL INVESTIGATIONS

►Analysis or the investigation made while working on the solution.

► Data visualisation charts must be analysed which plays a key role in project.finally we created a dashboard which shows the overall work at one space .

►DATASET:-

►Let's understand the data we're working with and give a brief overview of what each feature represents or should represent

1. Age- Age of employees
2. TotalWorkingYears – Total number of years employee worked
3. Attrition – Possibility of staying/leaving the company
4. YearsAtCompany - Number of years worked at that company
5. MonthlyIncome – Monthly salary
6. JobRole – Type of job
7. YearsInCurrentRole – Number of years in holding the position
8. YearsSinceLastPromotion – Last dated promotion
9. YearsWithCurrManager – number of years worked with the current manager
- 10.NumCompaniesWorked – Number of companies worked

► **IBM Cloud Account:-**

► IBM cloud provides a full-stack, public cloud platform with various products in the catalog, including options for compute,storage,networking, end to end developer solutions for app development, testing and deployment,security databases, and

cloud native services.

- ▶ creating the IBM cloud account by going to the IBM cloud login page, and click create on IBM cloud account. Enter our IBMid, and an ID is created based on the email that we enter. Completing the remaining fields with our information, and click create account by this the account created.

IBM Cognos Analytics:

- ▶ IBM Cognos Analytics is a web-based integrated business intelligence suite by IBM. It provides a tool set for reporting, analytics, score carding, and monitoring of events and metrics.

- ▶ creating amazing meaning full dashboards using Cognos Analytics. Creating a Dashboard: Dashboard track KPIs, metrics, and other data points in one visual, central place.

- ▶ They give a high level view of work, helping to make quick decisions and keeping everyone up to date. Storing the dataset into the dashboard we need to import the data into it. Set up our excel dashboard file create a table with the raw data Analyze the data build the dashboard customize with Macros, color, and More..

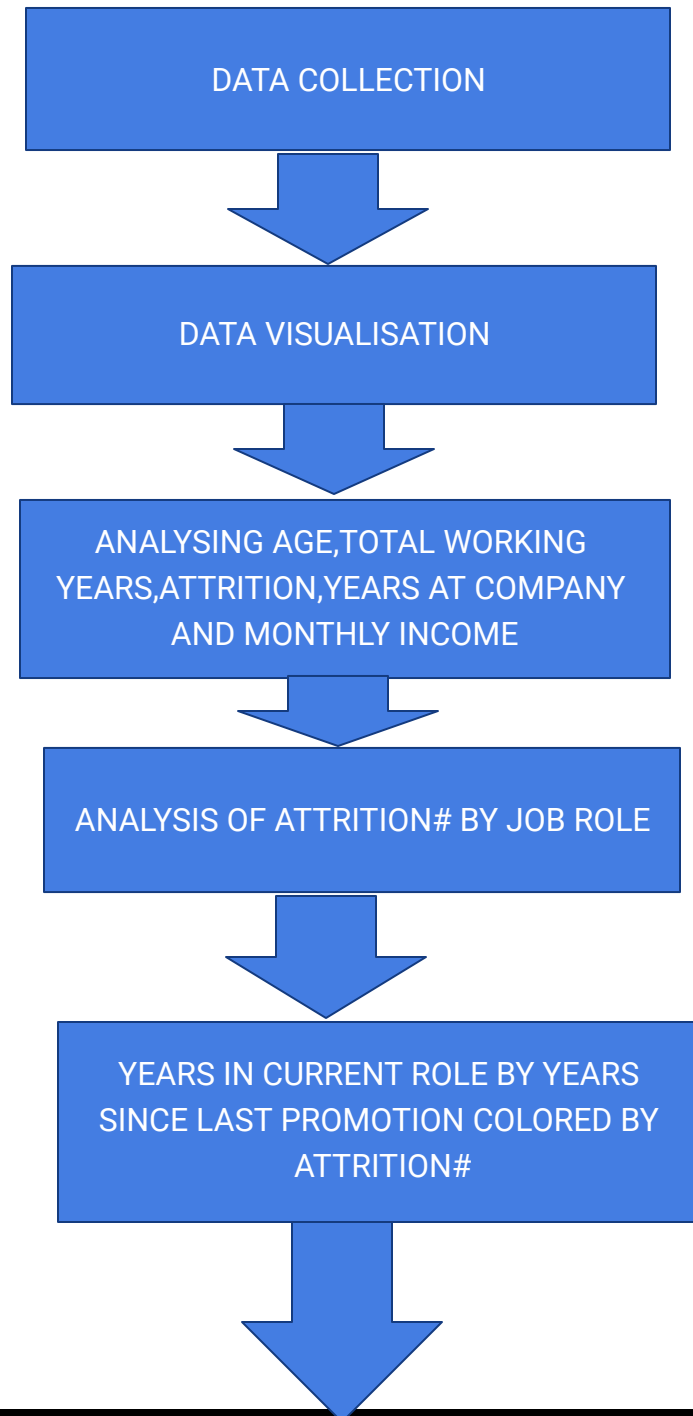
To export the Dashboard:

- ▶ To save the dashboard as image, select image. The select location for download dialog box opens..

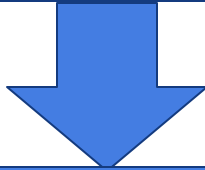
- ▶ To save the dashboard as a Flash file, select MHT, then do one

of the following. To save the dashboard as a PDF file, select PDF dashboard is exported and displayed in a browser window.

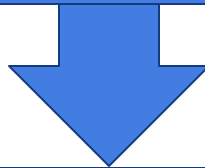
5.FLOWCHART



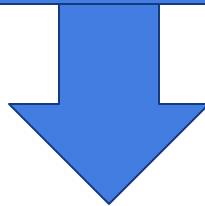
ATTRITION FOR YEARS WITH CURR
MANAGER HIERARCHY



ATTRITION BY NO.OF COMPANIES WORKED
COLORED BY JOB ROLE



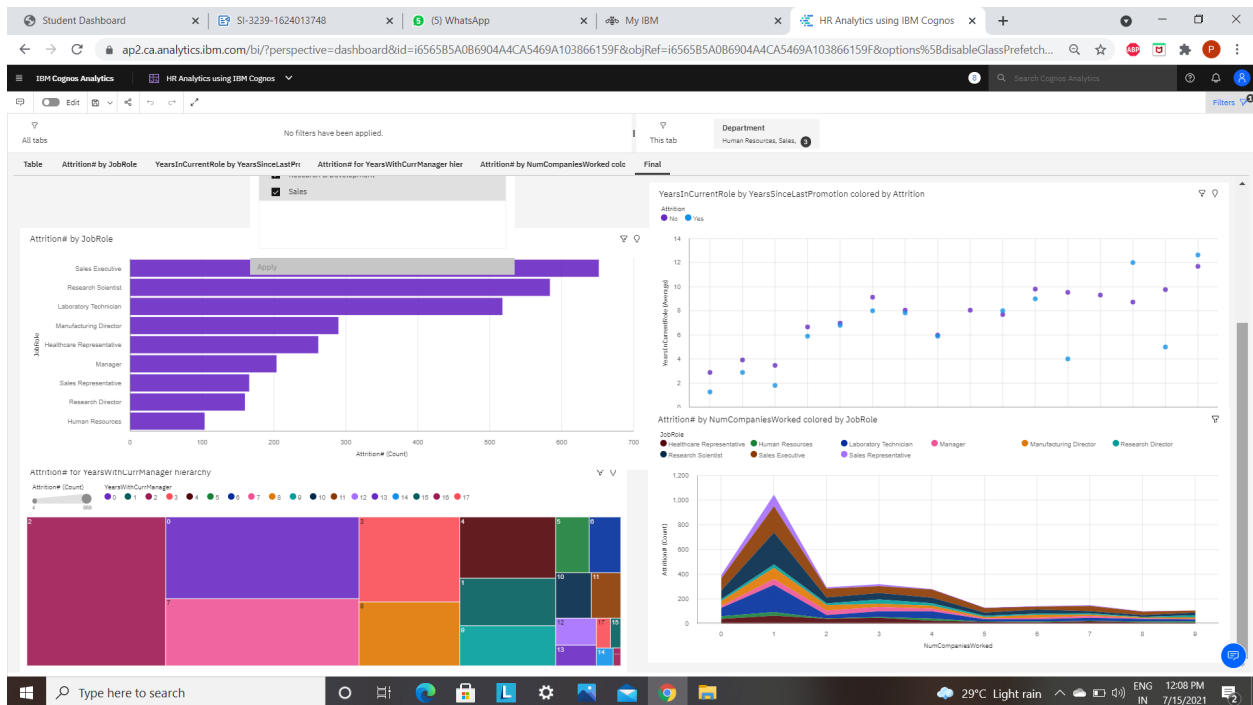
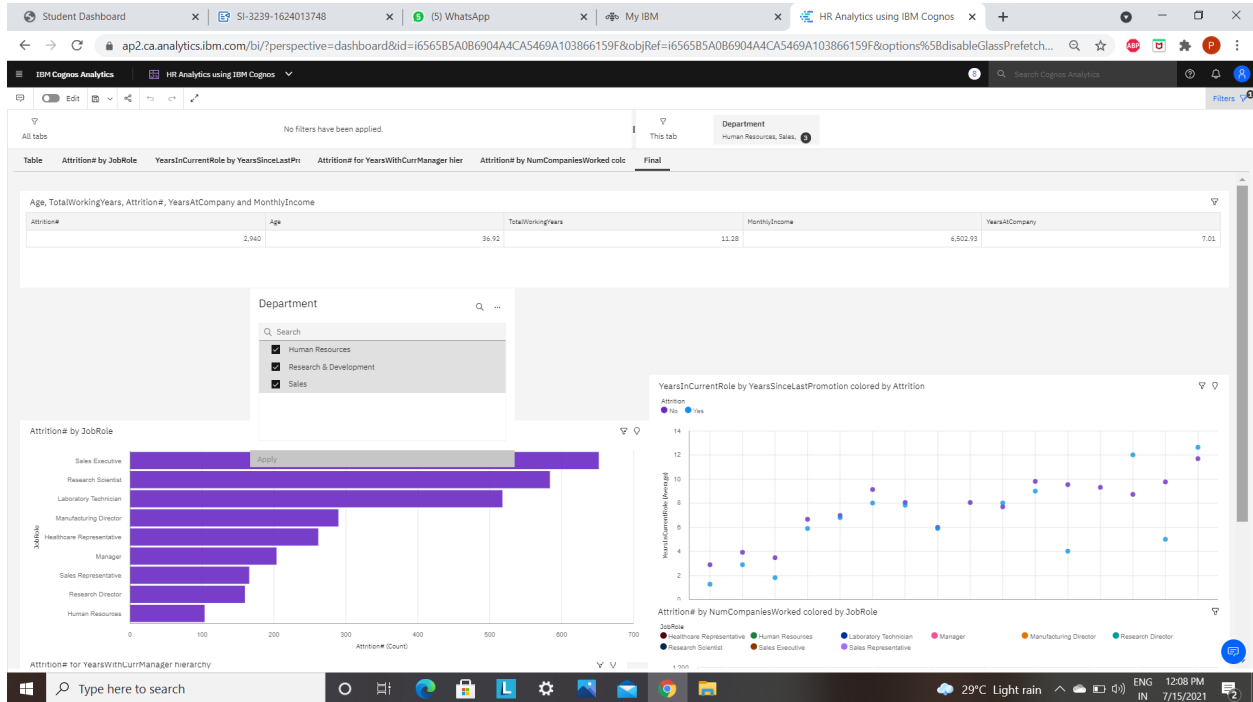
CREATING A DASHBOARD



EXPORTING AND CONCLUSION

6.RESULT

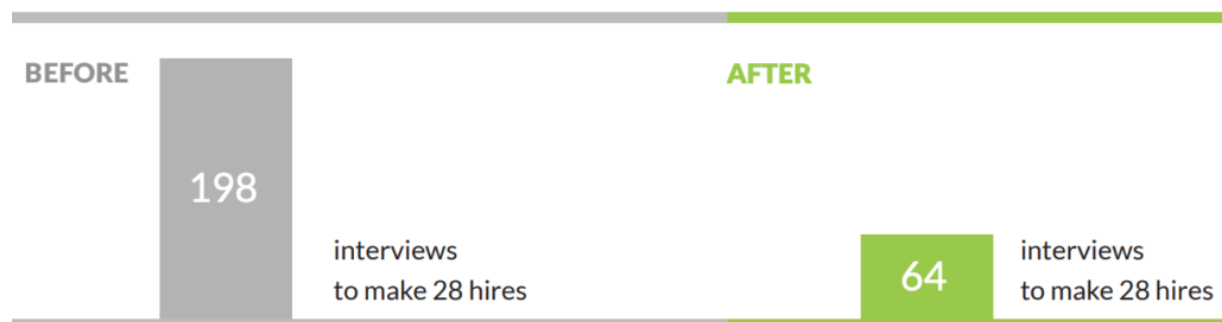
FINAL FINDINGS(OUTPUTS) OF THE PROJECT ALONG WITH SCREENSHOTS



7.ADVANTAGES & DISADVANTAGES

Advantages:-

►**Spotting underperforming areas in your HR operations:**For instance, if you notice that your time-to-hire has extended by 30% for most of your recruiters, this might indicate an issue in the hiring process that needs to be addressed. Sometimes automating parts of the process or swapping the order of your recruitment process steps can bring about an amazing result. As an example, our customer ImpacTech is able to hire developers with 2.5x fewer interviews.



- **Improving employee satisfaction & engagement rates:-**Analytics will not only help you improve your HR team's performance metrics. It will also positively impact all other team members. If your human resources team has access to insights such as the turnover rate or employer satisfaction survey results, they'll be equipped to improve the employee experience. As a result, your team will be more motivated to perform at their best.

- **Improving the recruitment process:-** If you conduct HR analysis correctly, you'll be able to track data such as job acceptance rates and average time-to-hire per position. However, you can also go a step further and include post-interview surveys for your candidates to learn how you can better improve the candidate experience and attract the right talent.
- **Predicting trends or employee behavior:-** By making the most of HR predictive analytics, you'll be able to act upon telltale signs, such as a drop in employee satisfaction survey results. This will allow you to fix minor issues before they escalate or strategize for the inevitable, such as your key employees leaving the company.

Disadvantages:-

- **Missed opportunity or deriving untrue insights,** if the HR team is using a complex tool and isn't skilled in data analysis.
- **Potential security issues,** if analytics and third-party tools that have access to sensitive information don't fulfill the right security standards. Luckily, this threat can be avoided by using tools with sound security procedures in place.
- **Potential ethical and legal issues,** if the data you track breaches privacy or accesses private employee information. For instance, think about the thin line between collecting insights from a public vs private Slack channel – if you ever consider analyzing communication, you must get consent from your employees and clear it with a lawyer!

8.APPLICATIONS

- Retention
 - Employee performance
 - Recruiting
 - Employee Development
 - Workforce Planning
 - Compensation & Incentive Programs
 - Hiring The Right Talent With Competency Acquisition
- Analytics**
- Classification Analysis To Determine The Success Rate Of Teams
 - Attrition Analysis
 - Capacity Analytics And Utilization
 - Employee Engagement

9.CONCLUSION

‣In the conclusion it has been revealed that although the practitioners and industries themselves believe in ability of HR analytics to transform the way the businesses have been working but its application is still in nascent stage. The importance of this area is understood but whether organizations possess analytical skills or not is proving to be the biggest challenge for industries. The literature studied in paper and organizations surveyed were of opinion they were already collecting analytics but reality states it is not widely accepted by majority of firms even today which leaves a further scope to identify factors that can help firms to implement the same and what methodologies can be adopted to achieve the targeted results.

10.FUTURE SCOPE

- ▶ HR Analysis has immense scope.Organisations are taking better informed decisions and data analysis is the means who takes the decision.organisations are using technology to serve their clients.In this process ,HR is evolving to a level where they need to deal with numbersand technology to come up with solutions.
- ▶ with knowledge in HR Analytics it will :
 - save time to come up with solutions.
 - identify trends in current learning and training patterns,in the long run ,a thoughtfull coaching strategy is necessary to give you and your team the skills they need to thrive.

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