# CHAPTER 1

# INTRODUCTION

## 1.1 Project Overview

Attrition is the predominant thing in the industry these days. It's the major problem which highlights in all the organizations. "Attrition is said to be the gradual reduction in the number of employees through retirement, resignation or death. It can also be said as Employee Turnover or EmployeeDefection" A well-trained and well-adapted employee leaves the organization; it creates a vacuum. So, the organization loses key skills,knowledge and business relationships. Modern managers and personnel administrators are greatly interested in reducing Attrition in the organization, in such a way that it will contribute to the maximum effectiveness, growth, and progress of the organization. Therefore, we need methods, algorithms to prediction of employeeattrition using variousdata mining techniques.

## 1.2 Purpose

The key to success in any organization is attracting and retaining top talent. As an HR analyst one of the key tasks is to determine which factors keep employeesat the company and which prompt others to leave. Given in the data is a set of data points on the employees who are either currently working within the company or have resigned.The objective is to improve these factors to prevent loss of good people.

# CHAPTER 2
# LITERATURE SURVEY

## 2.1 Existing problem

Attrition occurs when the workforce dwindles at a company as people leave andare not replaced. Attrition is often called a hiring freeze and is seen as a less disruptive way to trim the workforce and reduce payrollthan layoffs. Attritioncan also refer to the reduction of a customer base, often as a result of customers movingon and fewer new customers opting in. Attrition due to voluntary employee departures is different from layoffs, which occur when a company lets people go without replacing them. Turnover occurs when people leave their jobs voluntarily orinvoluntarily within a short span of time and are replaced with new talent.

## 2.2 References

## 1. Attrition Issues and Retention Challenges of Employees, 2012

Organizations planning should be giving close attention to why attrition is occurring in the pre-set. To ignore why people are leaving the organization is to ignore the organization's greatest asset – its people. People are needed to accomplish the task, but people are more than just tasks they perform. They are dreams, hopes, ambitions, creativity, and innovation. To recognize and cultivate these valuable assets is one of the surest ways to build an organization that leads rather than follows in

domestic and global markets. Thus, Organizations shouldcreate an environment that fosters ample growth opportunities, appreciation for the work accomplished and a friendly cooperative atmosphere that makes an employee feel connected in everyrespect to the organization. Retentionplans are an inexpensive way of enhancingworkplace productivity and engaging employees emotionally. Proficient employees keep the quality up and business operations run smoothly along with the cost saving in the longer run paper.

## 2. Predicting Employee Attrition using XGBoost Machine Learning Approach, 2018

Considering the worldwide competitive state of affairs, there's ocean of opportunities for hot and giftedpersons within the world, and given an honest probability, workers half fromone organization to a different. Turnover is considered the key issue for all organizations currently, as a result of its adverse effects on work productivity, and accomplishing structure objectives on time. To beat this drawback, organizations area unit currently taking support via machine learning techniques to predict the worker turnover.With high exactitude in prediction, organizations will take necessary actions at due course of your time for retention or succession of workers. Most of the information comes from basictime unit primarilybased info systems, that aren't extremely economical in prediction and modelling and these models aren't terribly correctin knowledge models and can't assist the organizations to require prospering selections. The first objective of this

analysis paper is to predict worker attrition i.e. whether or not the worker is reaching to leave or still work inside the organization. During this paper, we tend to proposea completely unique model for predicting worker Attrition mistreatment Machine Learning primarily based approach i.e. XGBoost that is extremelysturdy. So as to validatethe accuracy of the system projected for worker Attrition, the information set is noninheritable via on-line info and fetched to the system and extremely gorgeousand exactitude resultsarea unit shown by the system with respect to turnoverbehavior.

## 3. Prediction of employeeattrition using datamining, 2018

Currently a day's worker Attrition prediction become a serious drawback within the organizations. worker Attrition may be a huge issue for the organizations specially once trained, technical and key workers leave for a much better chance from the organization. This leads to loss to interchange a trained worker. Therefore, we tend to use this and past worker knowledge to research the common reasons for worker attrition or attrition. For the hindrance of worker attrition, we tend to applied a standard classification way, that is, call tree, supply regression, SVM, KNN, Random Forest, Naive mathematician ways on the human resource knowledge. For this we tend to implement feature choice technique on the information and analysis the results to stop worker attrition. this can be useful to firms to predict worker attrition, and additionally useful to their economic process by reducing their human resource price. A worker

would prefer to be part of or depart a corporation betting on several causes i.e., work setting, work place, gender equity, pay equity and lots of different. the remainder of the workers might imagine concerning personal reasons for example relocation because of family, maternity, health, problems with the managers or co-workers in an exceedingly team. worker attrition may be a major drawbackfor the organizations notably once trained,technical and key workers leave for best opportunities from the organizations. This finally results into financial loss to substitute a trained worker. Consequently, we tend to utilize this and past worker knowledge to assess the acquainted problems for worker attrition. the worker attrition identification helps in predicting and resolution the problems of attrition. we are able to use this knowledgeto prevent the rateof the workers.

## 4. Predicting Employee Attrition using Machine Learning, 2018

The growing interest in machine learning among business leaders and call manufacturers demands that researchers explore its use inside business organizations. One in all the main problems facing business leaders inside firms is that the loss of gifted workers. This analysis studies worker attrition mistreatment machine learning models.Employing an artificial knowledge created by IBM Watson, 3 main experiments were conducted to predict worker attrition. The primary experiment concerned coaching the initial class-imbalanced dataset with the subsequent machine learning models: support vector machine (SVM) with many kernel functions, random forest and KNearest neighbor (KNN).

The second experiment cantered on mistreatment adaptational artificial (ADASYN) approach to beat category imbalance, then preparation on the new dataset mistreatment the abovementioned machinelearning models. The third experiment concerned mistreatment manual under sampling of the information to balance between categories. As a result,coaching associate ADASYNbalanced dataset with KNN (K = 3) achievedthe very best performance, with 0.93 F1- score. Finally,by mistreatment feature choice and random forest, F1-score of 0.909 was achieved mistreatment twelveoptions out of a complete of twenty-nine options.

## 5. Employee Attrition and Employee Retention Challenges & Suggestions, 2018

This paper proposed that retention plans are an inexpensive way of enhancing workplace productivity and engaging employees emotionally. Proficient employees keep the quality up and business operations run smoothly along with the cost saving in the longer run.

| S. No | ARTICLE NAME | AUTHOR NAME | PUBLISHED YEAR | DRAWBACKS |
|---|---|---|---|---|
| 1 | Attrition Issues and Retention Challengesof Employees | Brijesh KishoreGoswami, Sushmita Jha | 2012 | Organizations should createan environment thatfosters ample growthopportunities |
| 2 | Predicting EmployeeAttrition using XGBoostMachine Learning Approach | Rachna Jain, Anand Nayyar | 2018 | Proposed a completely unique model for predictingworker Attrition mistreatment. |
| 3 | Prediction of employeeattrition usingdatamining | R Shiva Shankar,J Rajanikanth, V.V. Sivaramaraj u,K VSSR Murthy | 2018 | Attrition analysis using standard classification waysandfeature choicetechnique. |
| 4 | Predicting EmployeeAttrition using MachineLearning | Sarah S, Alduayj, Kashif Rajpoot | 2018 | Prediction of employee attrition usingMachine Learning algorithms such asKNN, SVM and RandomForest Algorithm. |
| 5 | Employee Attritionand Employee Retention Challenges & Suggestions | S. Guru Vignesh, Sarojini, S. Vetrivel | 2018 | Retention plans are an inexpensive way of enhancing workplace productivity and engaging employees emotionally. |

**Table 2.1 Comparision of Literature Survey**

## 2.3 Problem Statement Definition

Employee attrition is a major cost to an organization and predicting such attritions is the most important requirement of the Human Resources department in many organizations. In this project is to predict the attrition rate of employees of an organization. Employees who are forced to take on more work may be more inclinedto leavethemselves. This can cost companiesa significant amountof money as nowthey're forcedto recruit, hire, and train new employees to replace those who are leaving. To recognize and cultivate these valuable assets is one of the surest ways to build an organization that leads rather than follows in domestic and global markets. Thus, Organizations should create an environment that fosters ample growth opportunities, appreciation for the work accomplished and a friendly cooperative atmosphere that makes an employee feel connected in every respectto the organization. Retention plans are an inexpensive way of enhancingworkplace productivity and engaging employeesemotionally. Considering the worldwide competitive state of affairs,there's ocean of opportunities for hot and gifted persons within the world, and given an honest probability, workers half from one organization to a different. Turnover is considered the key issue for all organizations currently, as a result of its adverseeffects on work productivity, and accomplishingstructure objectives on time.

# CHAPTER 3
# IDEATION & PROPOSED SOLUTION

## 3.1 Empathy Map Canvas

An empathy map canvas is a more in-depth version of the original empathy map, which helps identify and describethe user's needs and pain points.
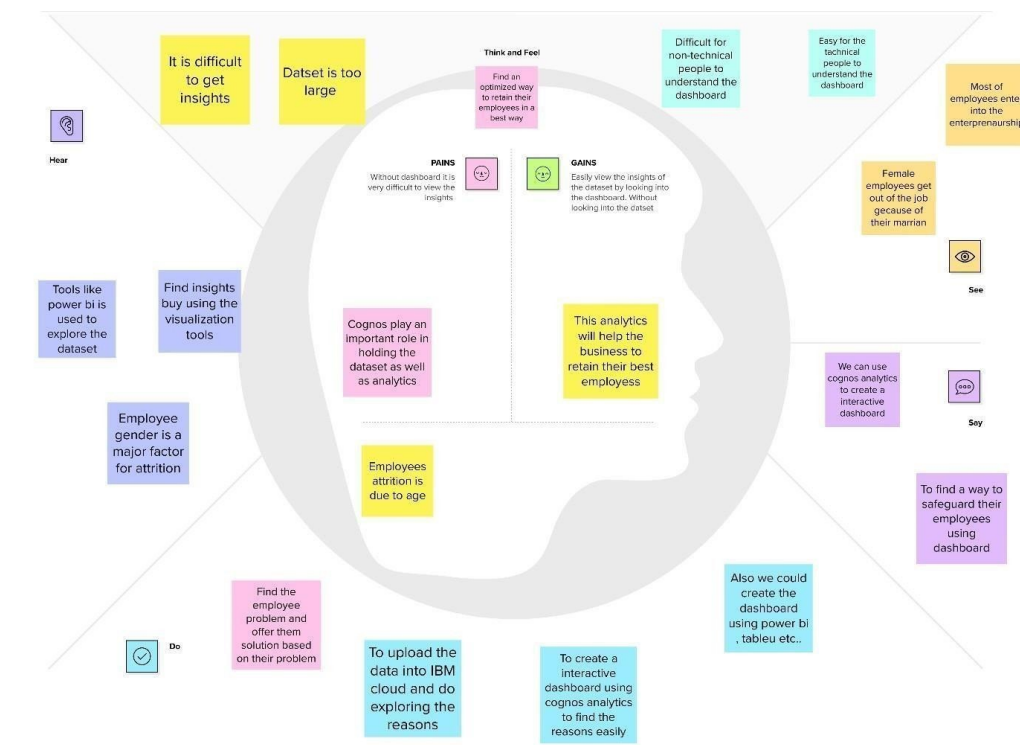


**Figure 3.1 Empathy Map Canvas**

Insight is a shift in organizational culture is needed to ensure better communication between a manager and his subordinate. Cognos play an important role in holding the dataset as well as analytics. Employee

gender is a major factor for attrition due to age and so on. To create a interactive dashboard using Cognosanalytics to find thereason easily.

## 3.2 Ideation & Brainstorming

**Step-1: Team Gathering, Collaboration and Select the Problem Statement**

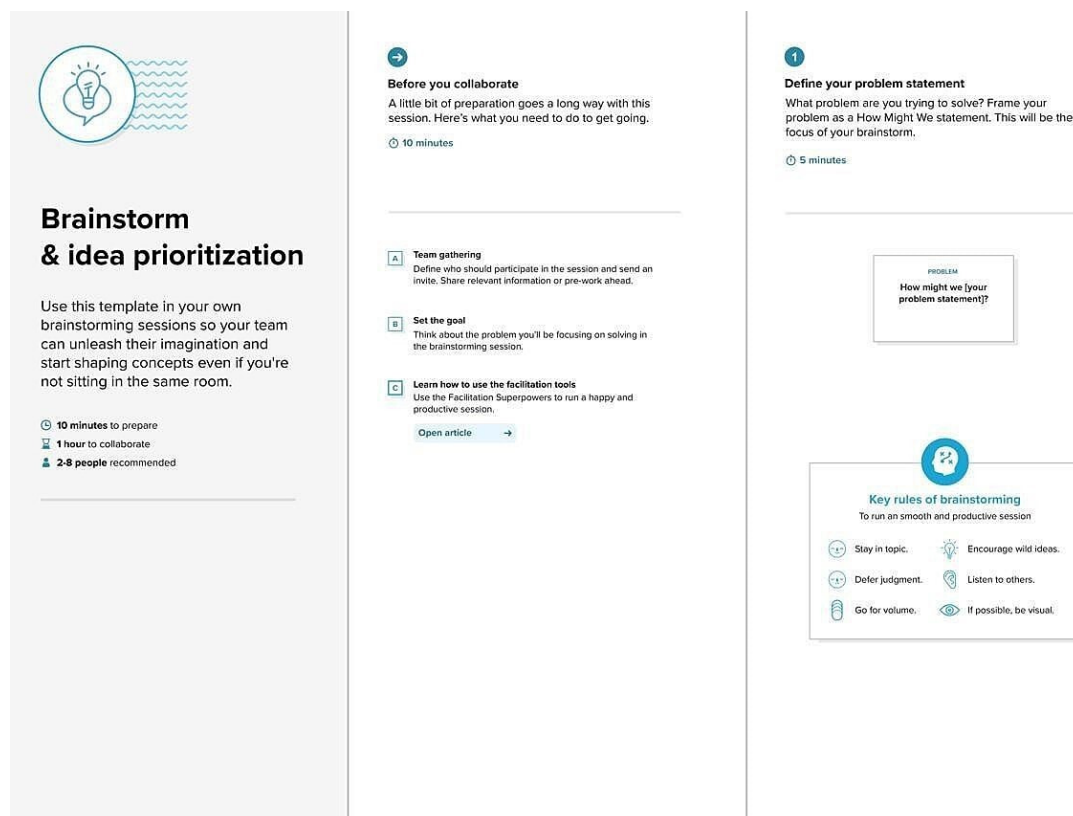We have gathered as a team and collaborate with each other to find the perfect problemstatement.



**Figure 3.2 Team gathering and select the problem statement**

## Step-2: Brainstorm, Idea Listing and Grouping

Brainstorming is a group problem-solving method that involves the spontaneouscontribution of creative ideas and solutions.
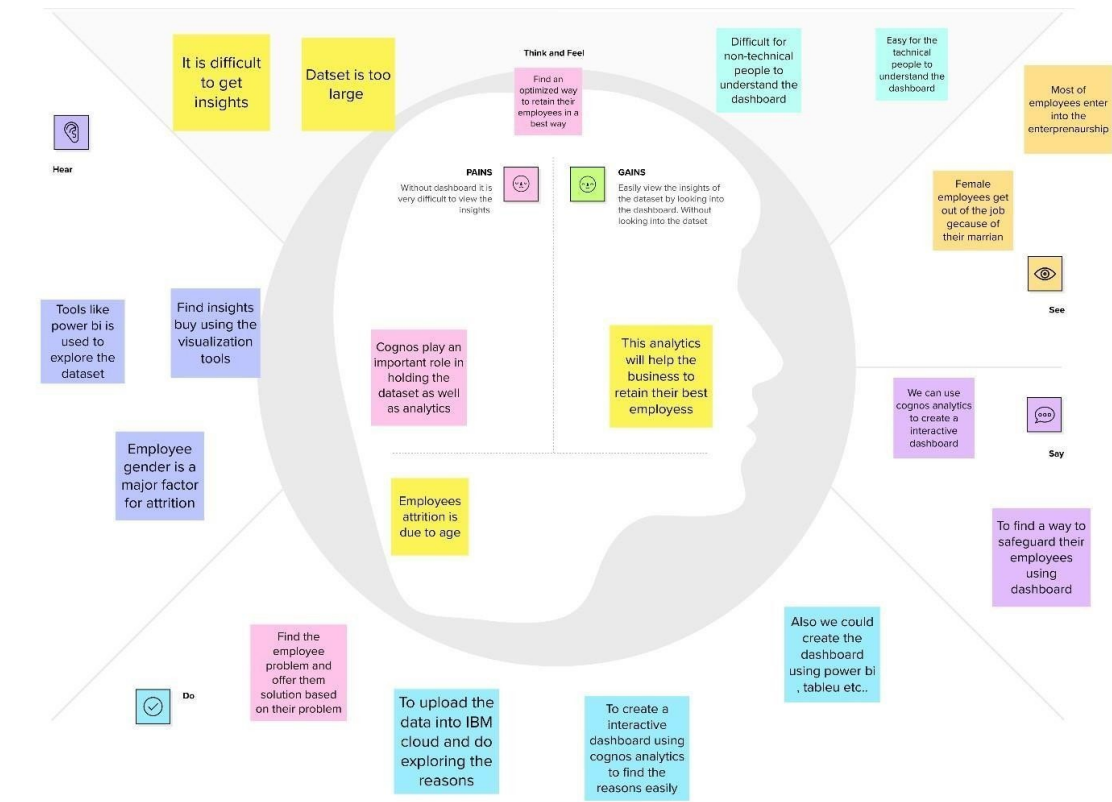


**Figure 3.3 Brainstorming**

**Step-3: Idea Prioritization**

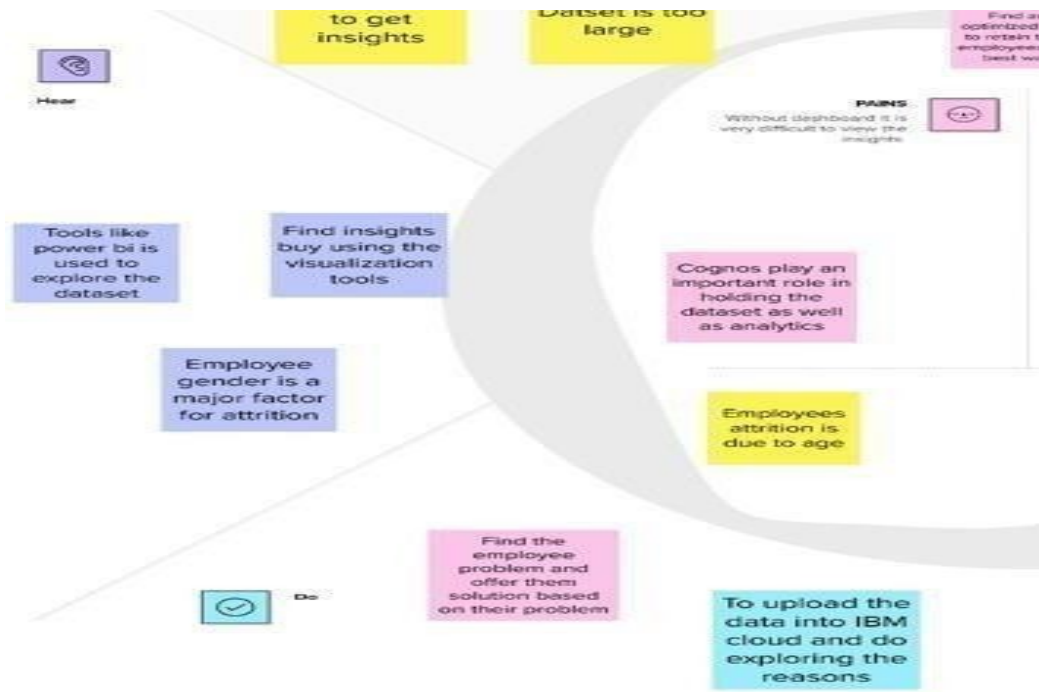Idea prioritization is just a part of the idea management process.



**Figure 3.4** Idea Prioritization

## 3.3 Proposed Solution

**Work-life balance**

What message is your company culture sending? If staff are expected to regularly work long hours and be at your beck and call, you'll likely run into issues with employee retention. Burnout is very real. A healthy work-life balance is essential, and people need to know that management understands its importance. Encourage staff to take vacation time, and if late nights are necessary to wrap up a project, see if you can offer late arrivals or an extra day off to compensate and increase

job satisfaction. Many companies offer telecommuting or flexible schedules to improvework-life balancefor their employees.

**Training and development**

In any position and industry,professionals want the possibility for advancement. Smart managers invest in their workers' professional development and seek opportunities for them to grow. Ask each of your direct reports about their short- and long-term goals to determine how you can help achieve them. Some companies pay for employees to attend conferences or industry events each year, or provide tuition reimbursement or continuing educationtraining.

**Team celebration**

Celebrate major milestones for individuals and for the team. Whether the team just finished that huge quarterly project under budget or an employee brought home a new baby, seize the chance to celebrate together with a shared meal or group excursion.

**Communication and feedback**

Keeping open lines of communication is essential for employee retention. Your direct reports should feel that they can come to you with ideas, questions and concerns, and likewise, they expect you to be honest and open with them about improvements they need to make in their own performance. Make sure you connectwith each staff members on a regular basis — don't let issuesbuild up for the annualreview.

| S.No. | Parameter | Description |
|---|---|---|
| 1. | Problem Statement (Problemto besolved) | To analyze the reason that why the attritionrate ofcorporate employees is drastically increasing |
| 2. | Idea / Solution description | To use the Cognos analytics, create an interactivedashboard that will answerthe userqueries |
| 3. | Novelty / Uniqueness | One of the crucialways to analyzethe reason isthe Visualization technique. The dashboard willeasily provide theinsight with the help of employee data of thecorporate |
| 4. | Social Impact / Customer Satisfaction | It will createimpact such as easyunderstandingof the hugedataset by just looking at the dataset |
| 5. | Business Model(Revenue Model) | Business model which will generate revenue tothe particular organization by answering the queries of the usersuch as HR of the organization, CEO etc... on how to retain theirwell talented employee |
| 6. | Scalability of theSolution | The provided solution will be scalable and lesscost ascompared to othertechniques such as ML, DL, Data Mining, etc.. |

**Table 3.1 Description of Proposed Solution**
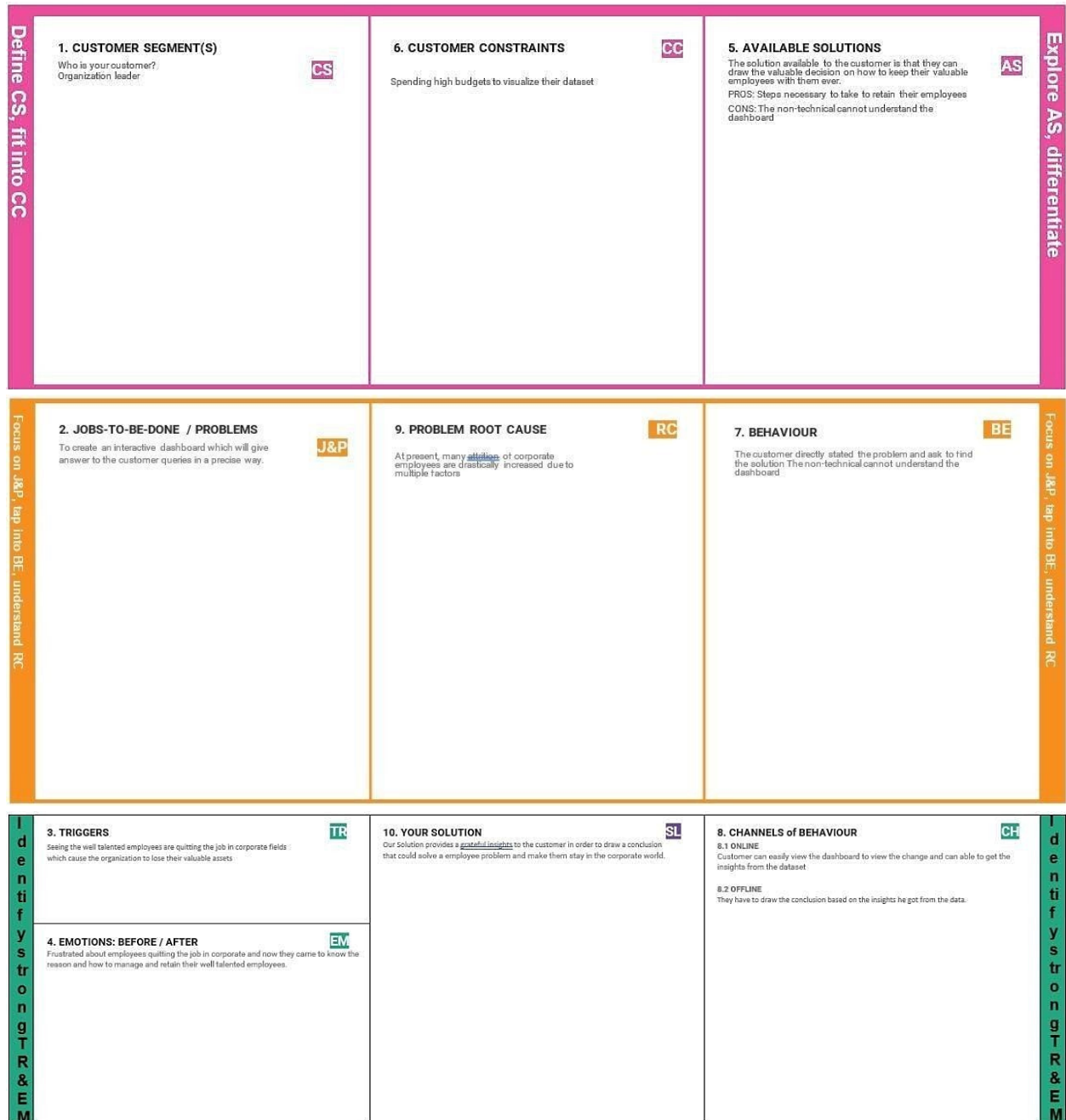
# 3.4 Problem Solution Fit

| Define CS, fit into CC | 1. CUSTOMER SEGMENT(S) **CS**<br><br>Who is your customer?<br>Organization leader | 6. CUSTOMER CONSTRAINTS **CC**<br><br>Spending high budgets to visualize their dataset | 5. AVAILABLE SOLUTIONS **AS**<br><br>The solution available to the customer is that they can draw the valuable decision on how to keep their valuable employees with them ever.<br>PROS: Steps necessary to take to retain their employees<br>CONS: The non-technical cannot understand the dashboard | Explore AS, differentiate |
|---|---|---|---|---|
| Focus on J&P, tap into BE, understand RC | 2. JOBS-TO-BE-DONE / PROBLEMS **J&P**<br><br>To create an interactive dashboard which will give answer to the customer queries in a precise way. | 9. PROBLEM ROOT CAUSE **RC**<br><br>At present, many attrition of corporate employees are drastically increased due to multiple factors | 7. BEHAVIOUR **BE**<br><br>The customer directly stated the problem and ask to find the solution The non-technical cannot understand the dashboard | Focus on J&P, tap into BE, understand RC |
| Identify strong TR & EM | 3. TRIGGERS **TR**<br>Seeing the well talented employees are quitting the job in corporate fields which cause the organization to lose their valuable assets<br><br>4. EMOTIONS: BEFORE / AFTER **EM**<br>Frustrated about employees quitting the job in corporate and now they came to know the reason and how to manage and retain their well talented employees. | 10. YOUR SOLUTION **SL**<br>Our Solution provides a grateful insights to the customer in order to draw a conclusion that could solve a employee problem and make them stay in the corporate world. | 8. CHANNELS of BEHAVIOUR **CH**<br>8.1 ONLINE<br>Customer can easily view the dashboard to view the change and can able to get the insights from the dataset<br><br>8.2 OFFLINE<br>They have to draw the conclusion based on the insights he got from the data. | Identify strong TR & EM |

**Figure 3.5 Problem Solution Fit**

# CHAPTER 4

# REQUIREMENT ANALYSIS

## 4.1 Functional Requirements

Following are the functional requirements of the proposed solution.

| FR No. | Functional Requirement(Epic) | Sub Requirement (Story / Sub-Task) |
|--------|------------------------------|-------------------------------------|
| FR-1 | User Registration | User needs to give theiremail and password. |
| FR-2 | Login Page | Login with username and password. |
| FR-3 | List of Analytics | The webpage consists of many analytical dashboards. |
| FR-4 | User Dashboard | Take thedata given by user and interactivedashboard can be created. |
| FR-5 | Analysis and Estimation | Analyze the corporate employee attrition from the data and estimate corporate using the Data DrivenApproach i.e., CognosAnalytics with Watson. |

**Table 4.1 Functional Requirements of Project**

## 4.2 Non – Functional Requirements

Following are the non-functional requirements of the proposed solution.

| FR No. | Non-Functional Requirement | Description |
|---|---|---|
| NFR-1 | **Usability** | All the data which is needed will be displayed in one which is easily understandable and will be useful for user to enhance the corporate employee attrition with higher accuracy and also, they can getthe insights of employees. |
| NFR-2 | **Security** | Only recognized users canaccess the resource. |
| NFR-3 | **Reliability** | A new Visualization and dashboard thatis added or erased it won't affectotherdashboards. |
| NFR-4 | **Performance** | Data analytics helps in executing the existingalgorithms fasterwith large data sets. Therefore, it will be helpful to people and Business persons to gain profitin their business. |
| NFR-5 | **Availability** | By using the technique of data analysis, resource allocation can be made to make resources available atany time to achieve high profit. |
| NRF-6 | **Scalability** | The data storedcan be viewedand retrieved atanytime and anywhere. |

**Table 4.2 Non-Functional Requirements of Project**

# CHAPTER 5

# PROJECT DESIGN

## 5.1 Data Flow Diagram
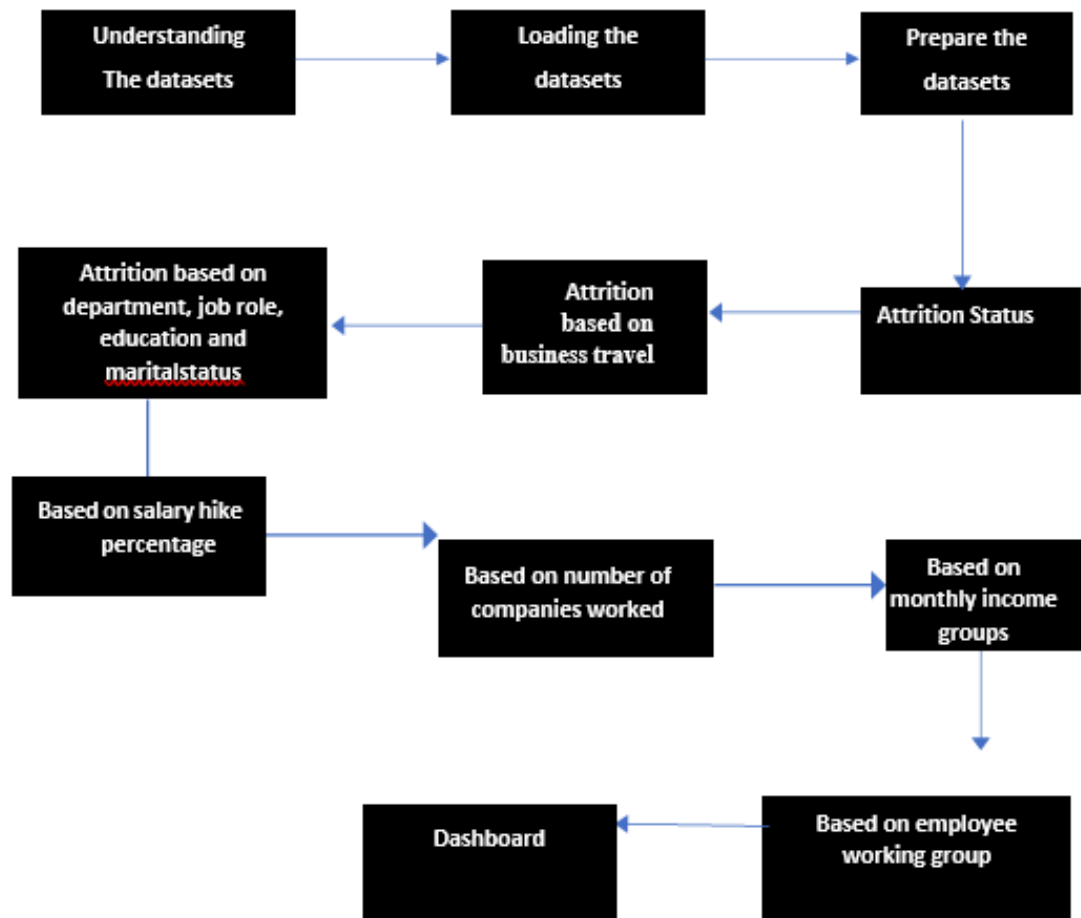


**Figure 5.1 Data Flow of Project**

# 5.2 Solution & Technical Architecture
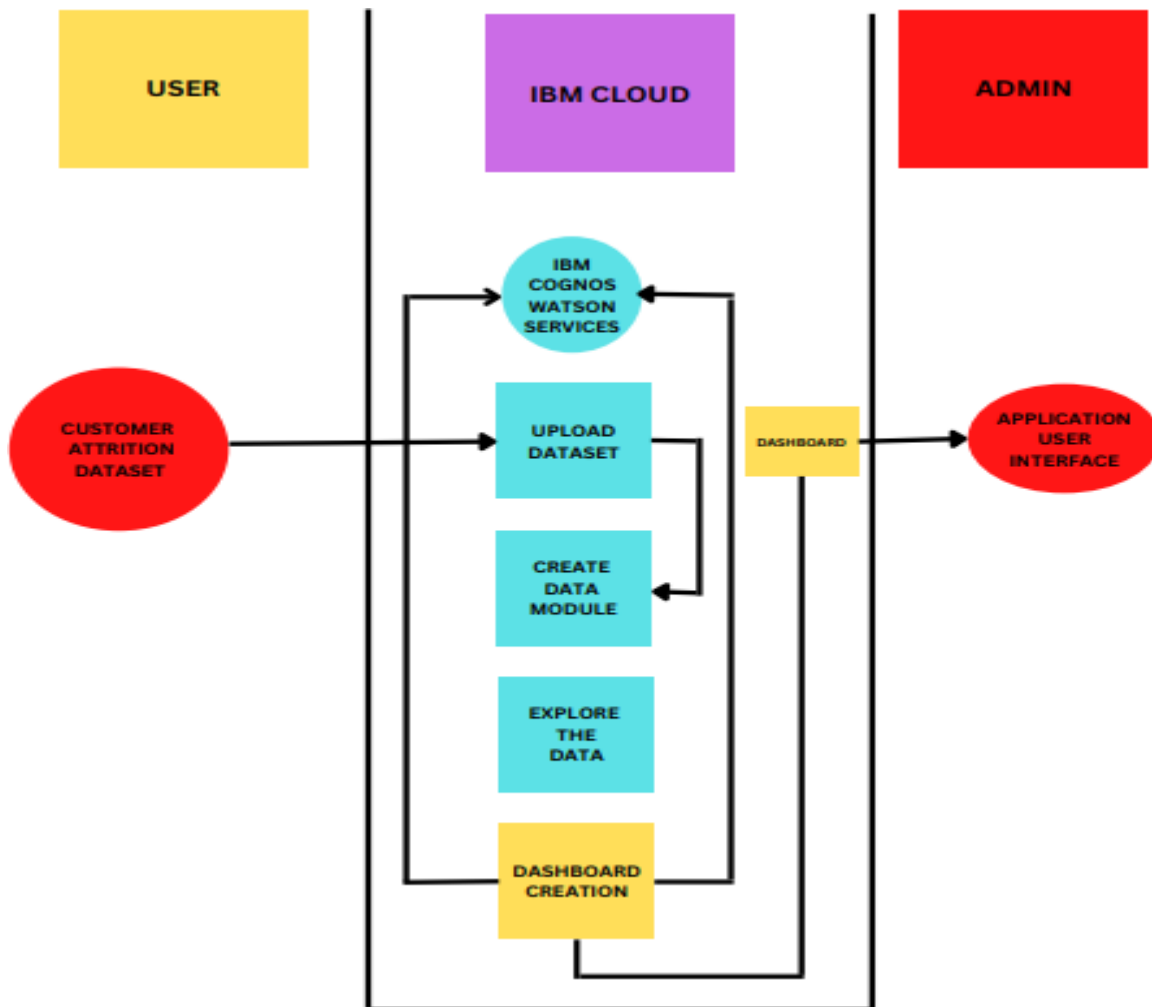


**Figure 5.2 Solution &Technical Architecture of Project**

# Table-1: Components & Technologies

| S. No | Component | Description | Technology |
|---|---|---|---|
| 1. | User Interface | How user interacts with applicatione.g.Web UI etc. | HTML, CSS etc. |
| 2. | Application Logic-1 | Logic for a process in the application | Python |
| 3. | Application Logic-2 | Logic for a process in the application | IBM Cognos Analytics service |
| 4. | Application Logic-3 | Logic for a process in the application | IBM Cloud |
| 5. | Database | Data Type, Configurations etc. | MySQL |
| 6. | Cloud Database | Database Service on Cloud | IBM Cloud |
| 7. | File Storage | File storage requirements | IBM Block Storage orOther StorageService or Local Filesystem |
| 8. | Infrastructure(Server / Cloud) | Application Deployment on LocalSystem / Cloud Local Server Configuration: CloudServer Configuration: | Local, CloudFoundry, Kubernetes,etc. |

**Table 5.1 Components and Technologies**

## Table-2: Application Characteristics

| S.No. | Characteristics | Description | Technology |
|---|---|---|---|
| 1. | Open-Source Frameworks | List the open-source frameworks used | PowerBi |
| 2. | Performance | Design consideration for the performance of the application (Number of requests per sec, useofCache, use of CDN's) etc. | Technology used: IBMCognosAnalytics |

**Table 5.2 Application Characteristics**

## 5.3 User Stories

| User Type | Functional Requirement (Epic) | User Story Number | User Story / Task | Acceptance criteria | Priority | Release |
|---|---|---|---|---|---|---|
| | Understanding the datasets, Loading the datasets, Prepare the datasets | USN-1 | Collecting the dataset and it is in unstructured format, so we need format it according to our needs | It contains all the data(information) needed for our project | Low | Sprint-1 |
| Administrator | Attrition Status, Attrition Based On business travel, Attrition based on department, job role, education and marital status | USN-2 | Attrition in business can mean the reduction in staff and employees in a company through normal means, such as retirement and resignation, the loss of customers or clients to old age or growing out of the company's target demographic. | Changes in management style, company structure, or other aspects of the company might cause employees to leave the company voluntarily, resulting in a higher attrition rate. | High | Sprint-2 |

| | | | | | | |
|---|---|---|---|---|---|---|
| | Based on salary hike percent, based on number of companies worked, based on monthly income groups Based on employee working group | USN-3 | It may include base salary, wages, incentives and/or commission. Total compensation includes cash rewards as well as any other company benefits. | This will be used in increase of profit, we can able to predict it with this data | High | Sprint-3 |
| | DASHBOARD | USN-4 | A data dashboard is a tool many businesses use to track, analyze, and display data usually to gain insight into the overall wellbeing of an organization, department, or specific process | A data dashboard is an information management tool used to track, analyze indicators, metrics, and data points. | High | Sprint-4 |

**Table 5.3 User Stories**

# CHAPTER 6

# PROJECT PLANNING AND SCHEDULING

## 6.1 Sprint Planning and Estimation

| Sprint | Functional Requirement(Epic) | User Story Number | User Story/ Task | Story Points | Priority | Team Members |
|---|---|---|---|---|---|---|
| Sprint-1 | Understanding thedatasets, Loadingthe datasets,Prepare the datasets | USN-1 | Collecting thedataset and it is in unstructured format, so we needformat it according to ourneeds. | 2 | High | Sureka S Manisha S Manju S Padmaja S |
| Sprint-2 | Attrition Status,Attrition Based on business travel, Attrition basedon department, job role, education and marital status | USN-2 | Attrition in business can mean the reduction in staff and employees in a companythrough normal means, such as retirement and resignation, the loss of customers or clients to old age or growing out of the company's target demographic. | 1 | Medium | Sureka S Manisha S Manju S |
| Sprint-3 | Based on salary hike percent, based on numberof companies worked,based on monthly | USN-3 | It may include base salary,wages, incentives and/or commission. Total | 2 | High | Padmaja S Sureka S Manju S Manisha S |

| | | | compensation includes cashrewards as wellas any other compa ny benefit s. | | | |
|---|---|---|---|---|---|---|
| Sprin t-4 | DASHBOARD | USN-4 | It may include base salary,wages, incentives and/or commission. Total compensati on includes cashrewards aswell as anyother company benefits. | 2 | High | Padmaja  S Sureka   S Manju    S Manisha  S |

## Table 6.1 Sprint Planning and Estimation

**Sprint 1**

To collect the dataset and do preprocessing techniques in order to clean the dataset. Cleaning includes the process of removing the null values, scaling the values of the column which has higher values, removingthe noisy data and checkingfor the outliers. After preprocessing is done, we understand the dataset by doing the exploratory analysis of the data. Finally, we have to upload the data into Cognos analytics to do the analysis. Sprint 1 is estimated to be completed within one week.

**Sprint 2**

To develop the dashboard for attrition status. To showcase the attrition status based on the Business Travel facility of the employees. And next is to visualize the attritionstatus of the employees by Department wise, Job-role wise and Education Level wise and also the Marital status plays another major role in Employee attrition. Sprint 2 is estimated to be completed within 6 days.

**Sprint 3**

To develop the visualization that represents Employee status based on Salary Hike Percent, Visualization shows the attrition status of the employees, based on their previous working experience in other companies- number of companies, analytical visualization represents the attrition status of employees based on their Monthly Income. So we can easily find the analytical solution of the problem stating where the higher Income groups are trending to leave the company or Lower Income groupin that category and Attrition based on Employee Working Groups. Sprint 3is planned to complete in one week oftime.

**Sprint 4**

In this sprint we have to represent the Employee Attrition Dashboard that showsthe various insightsthat is used to reducethe attrition in corporate. As sprint 4 is a integration of all other three sprintsand It is estimated to becompleted within 4 days.

# Project Tracker, Velocity and Burndown Charts

| Sprint | Total Story Points | Duration | Sprint Start Date | Sprint End Date (Planned) | Story Points Completed (as on Planned End Date) | Sprint Release Date (Actual) |
|--------|--------------------|----------|-------------------|---------------------------|------------------------------------------------|------------------------------|
| Sprint-1 | 10 | 6 Days | 24 Oct 2022 | 29 Oct 2022 | 8 | 29 Oct 2022 |
| Sprint-2 | 10 | 6 Days | 31 Oct 2022 | 05 Nov 2022 | 9 | 05 Nov 2022 |
| Sprint-3 | 10 | 6 Days | 07 Nov 2022 | 12 Nov 2022 | 8 | 12 Nov 2022 |
| Sprint-4 | 10 | 6 Days | 14 Nov 2022 | 19 Nov 2022 | 9 | 19 Nov 2022 |

**Table 6.2 Project Tracker and Velocity**

## Velocity

Imagine we have a 10-day sprint duration, and the velocity of the team is 20 (points per sprint). Let's calculate the team's average velocity (AV) per iteration unit (story points per day).

$$AV = \frac{sprint\ duration}{velocity} = 6/10 = 0.6$$

## 6.2 Sprint Delivery Schedule

| TITLE | DESCRIPTION | DATE |
|---|---|---|
| **Literature Survey & Information Gathering** | Literature survey on the selected project & gathering information by referring the technical papers, research publications , journals etc. | 1 SEPTEMBER 2022 |
| **Prepare Empathy Map** | Prepare Empathy Map Canvas to capture the user Pains & Gains, Prepare list of problem Statements that are to be solved by this project. | 7 SEPTEMBER 2022 |
| **Ideation** | List the ideas by organizing a brainstorming session and prioritize the top 3 ideas based on the feasibility & importance. | 14 SEPTEMBER 2022 |
| **Proposed Solution** | Prepare the proposed solution document, which includes novelty, feasibility of idea, revenue model, social impact, scalability of solution, etc. | 21 SEPTEMBER 2022 |
| **Problem Solution Fit** | Prepare problem - solution fit document. | 27 SEPTEMBER 2022 |
| **Solution Architecture** | Prepare solution architecture document. | 29 SEPTEMBER 2022 |

| | | |
|---|---|---|
| Customer Journey | Prepare the customer journey maps to understand the user interactions & experiences with the application (entry to exit). | 12 OCTOBER 2022 |
| Functional Requirement | Prepare the functional requirement document. | 5 OCTOBER 2022 |
| Data Flow Diagrams | Draw the data flow diagrams and submit for review. | 5 OCTOBER 2022 |
| Technology Architecture | Prepare the technology architecture diagram | 13 OCTOBER 2022 |
| Prepare Milestone & Activity List | Prepare the milestones & activity list of the project. | 22 OCTOBER 2022 |
| Project Development – Delivery of Sprint-1, 2, 3 & 4 | Develop & submit the developed code by testing it. | 14 NOVEMBER 2022 |

**Table 6.3 Sprint Delivery Schedule**

# CHAPTER 7
# CODING AND SOLUTIONING

## 7.1 Feature 1

Excel worksheets come with a standard limit of 1,048,576 rows. While performance in Excel will slow well before the said row limit, it's a common requirement for users to analyze datasets over one million rows in size. Congo's Analytics compresses your data so you can extract insights from large datasets. With a well- built data model, Congo's Analytics can help you analyze datasets containing over 100 million rows.

Cognos Analytics also offers useful features for working with truly large datasetsthat are greater than several hundred million rows. For example, users can set up aggregation tables in Cognos Analytics. Aggregations take advantage of pre- calculated data to speed up queries, reducing the time needed to render your reports.

Additional computing power can be unlocked with Cognos Analytics Premium. If your organization needs to store very large datasetsin Cognos Analytics, you can purchasededicated cloud Cognos Analytics Premium instances to enable even faster query times and refresh capabilities.

While Cognos Analytics supports many standard data visualizations out of the box, it's also possible to build your own with custom data visualizations. By adding open- source data visualization libraries from R and Python, analystscan create highly customizable visualizations to add

to theirnext Cognos Analyticsreport.

With around 750 million users, Excel remains the world's number one data analysistool. With so many people actively using the tool, it's no surprise that users often ask for an Excel export of the data displayed in reports and dashboards.

The challenge for BI analysts has been how to offer this flexibility in a way that maintains the integrityof the connected reporting environment.

With that in mind, Microsoft released Analyze in Excel. Excel can connect directly to your underlying Cognos Analytics data, so users can do their own tabular and ad-hoc reporting. If you're comfortable creating PivotTables in Excel, you can use this familiar experience to slice and dice your data, referencing the same datasetsused in other Cognos Analytics reports.

Finally, users can get the latest data from Cognos Analytics datasets by refreshing their Excel connections. This ease of access is a game-changer for organizations stuck between the two platforms.

## 7.2 Feature 2

Cognos Analytics can help you build interactive and insightful mappingdata visualizations. It comes standard with three different map types: Standard Map, Filled Map (choropleth), or ArcGIS Maps for Cognos Analytics.

Aligning on one version of the truth across many reports is a

challenging undertaking that often ends with inconsistent definitions of metrics and KPIs. One of Cognos Analytics most compelling features is its ability to define measures in a data model and then re-use these calculations across numerous connected reports. By defining your KPI calculations in central datasets, you can ensure "Gross Profit"and "Sales Revenue"return the same numbers, regardless of which reportyou're viewing.

This feature differentiates Cognos Analytics from other data visualization tools, which often define KPIs in each report individually.

# CHAPTER 8
# TESTING

## 8.1 Test Cases

### 1. Attrition Status

The attrition status of employees, whether they are with or without organization.
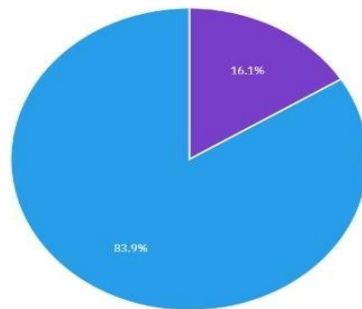


**Figure 8.1 AttritionStatus**

### 2. Attrition Basedon Business Travel(Yes / No)

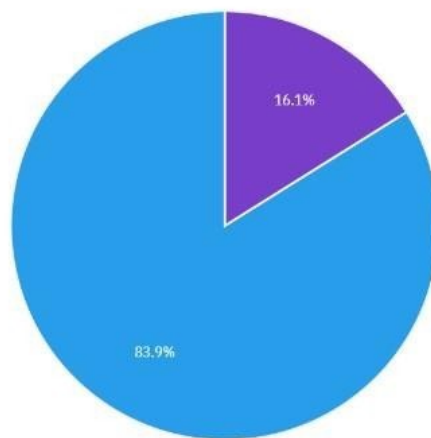This attrition based on the Business travel facility of the employees.The test case shownbelow as Bar Visualization.



**Figure 8.2 Attrition based on BusinessTravel**

## 3. Attrition Based on Department, Job Role, Educationand Marital Status

The following bar chart shows the attrition status of the employees byDepartment wise, Job-role wise and Education Level wise and also the marital statusplays another major role in Employee attrition.
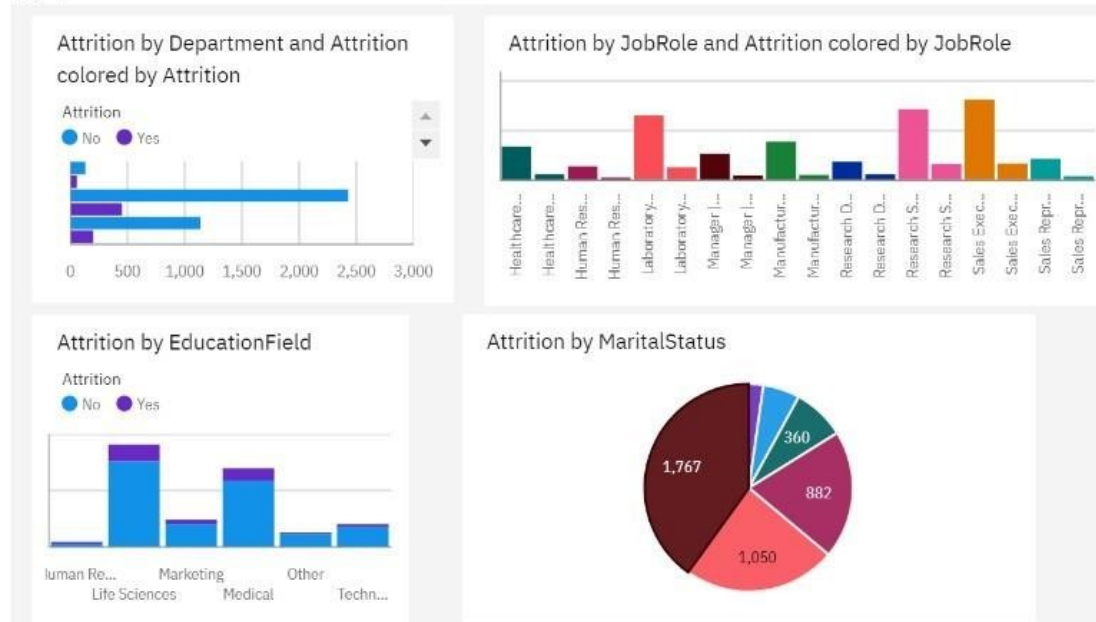


### Figure 8.3 Attrition based on Department, Job Role, Education
### and MaritalStatus

## 4. Based on Salary Hike Percent

This visualization chart represents Employeestatus by SalaryHike Percent.

Tab 1

Attrition by Salary Hike %
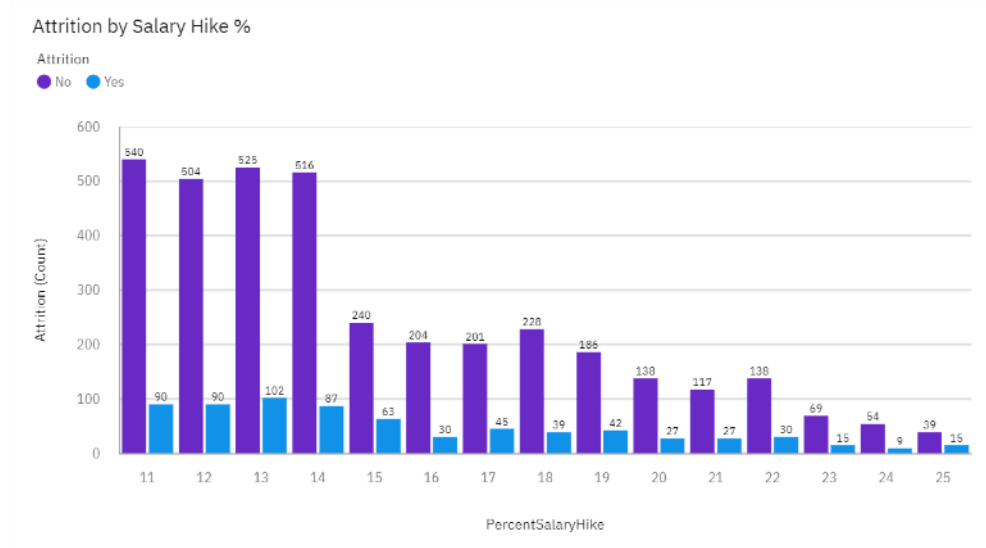
Attrition
● No  ● Yes



**Figure 8.4 Attrition based on SalaryHike Percent**

## 5. Based on No of Companies Worked

The following visualization shows the attritionstatus of the employees, based ontheirprevious working experience in other companies- number of companies.

Tab 2

Attrition by NumCompaniesWorked
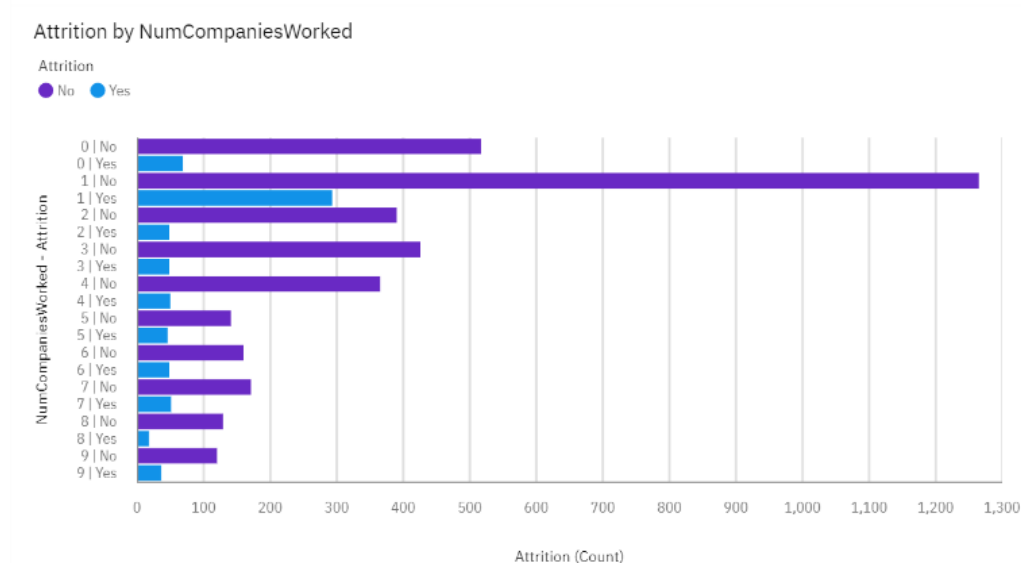
Attrition
● No  ● Yes



**Figure 8.5 Attritionbased on number of companies worked**

## 6. Based on Monthly Income Groups

This visualization represents the attrition status of employees based on their Monthly Income. So, we can easily find the analytical solution of the problem stating where the higher Income groups are trending to leave the company or lower in come group in that category.
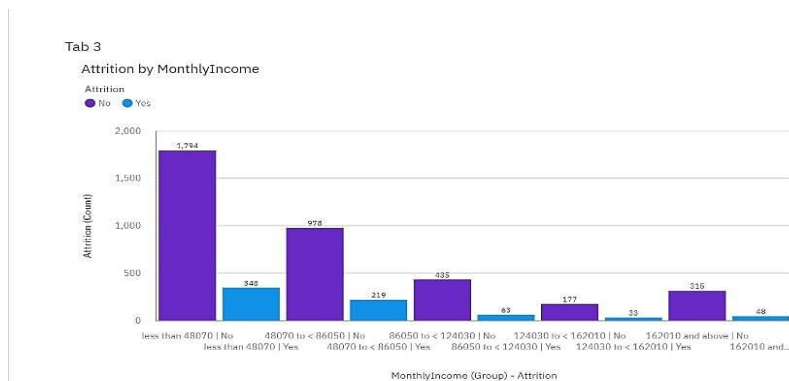


**Figure 8.6 Attrition based on Monthly IncomeGroup**

## 7. Based on Employee WorkingGroups

These visualizations represent based On

Employee. Working Group.



**Figure 8.7 Attrition Basedon Employee Working Groups**
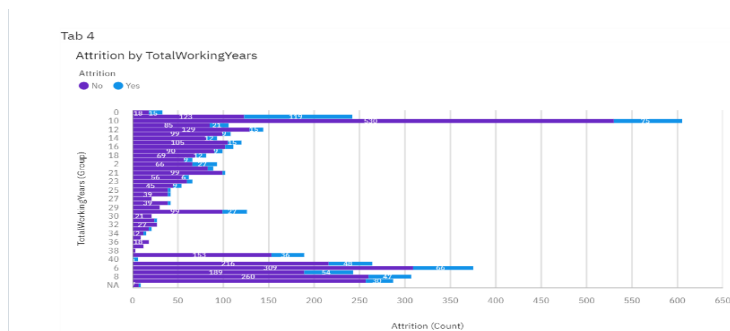
## 8. Dashboard

This visualization shows the EmployeeAttrition Dashboard.



**Figure 8.8 Dashboard**

# CHAPTER 9
## RESULTS

## Performance Metrics

The attrition status of employees, whether they are with or without organization.

Tab 1

Employee Attrition

Attrition
● Yes  ● No



**Figure 9.1 Attrition Status**

This attrition based on the Business travel facility of the employees. The test case shown below as Bar Visualization.

Tab 2
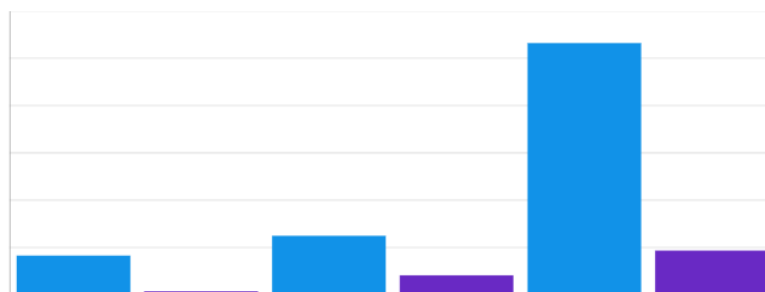


**Figure 9.2 Attrition based on BusinessTravel**

The following bar chart shows the attrition status of the employees by Department wise, Job-role wise and Education Level wise and also the marital status plays another major role in Employee attrition.
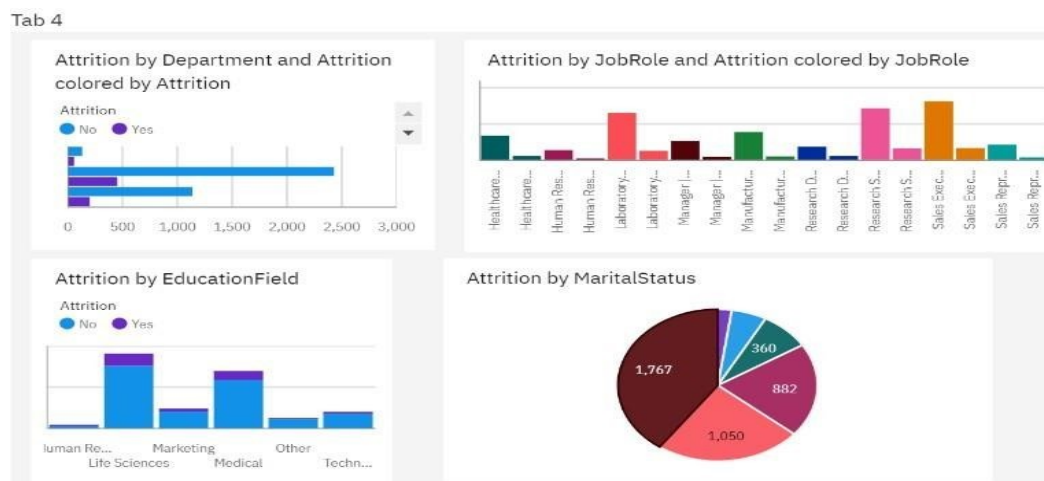


**Figure 9.3 Attrition based on Department, Job Role, Education and MaritalStatus**

This visualization chart represents Employee status by Salary Hike Percent.
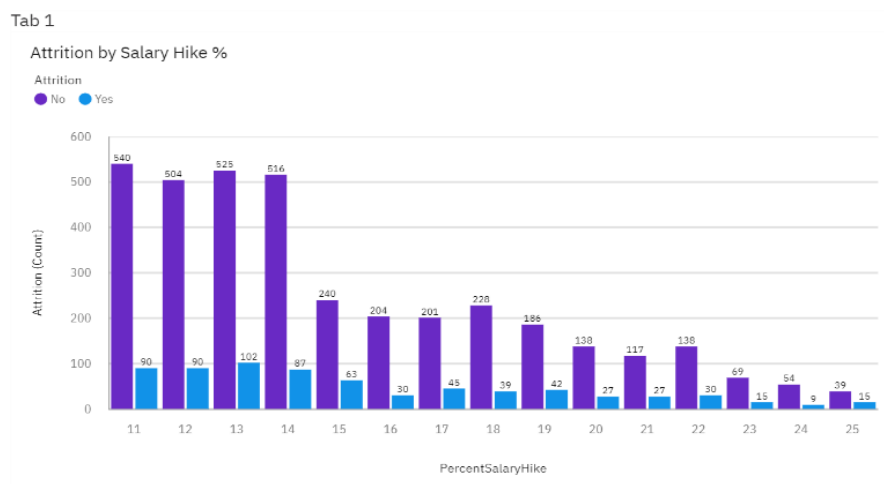


**Figure 9.4 Attrition based on SalaryHike Percent**

The following visualization shows the attrition status of the employees, based on their previous working experience in other companies.



Tab 2

Attrition by NumCompaniesWorked
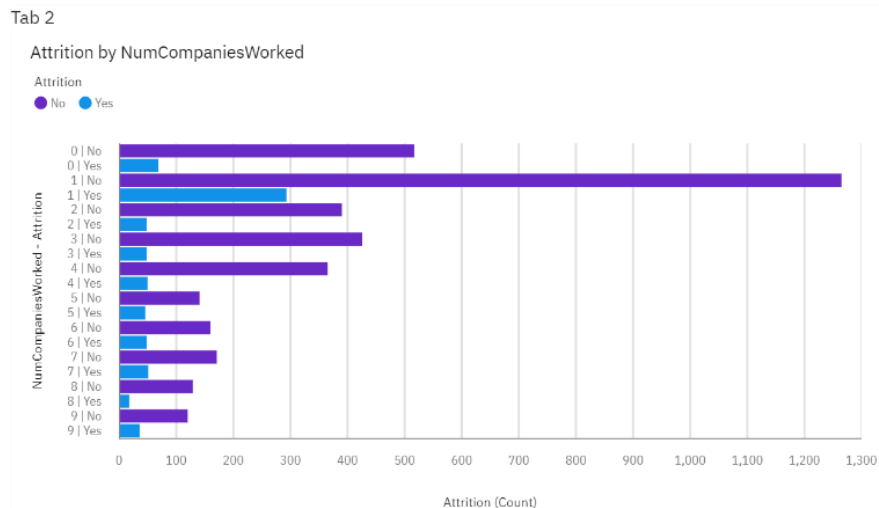
**Figure 9.5 Attritionbased on numberof companies worked**

These visualization represents the attrition status of employees based on their Monthly Income.  So we can easily find the analytical solution of the problem stating where the higher Income groups are trending to leave the company or Lower Income group in that category.
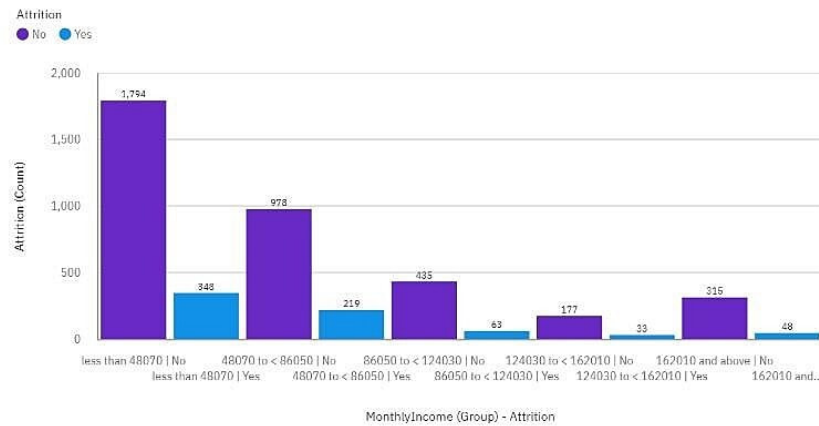
**Figure 9.6 Attritionbased on MonthlyIncome Group**

These visualization represent based On Employee Working Groups. It represent the employees working years.
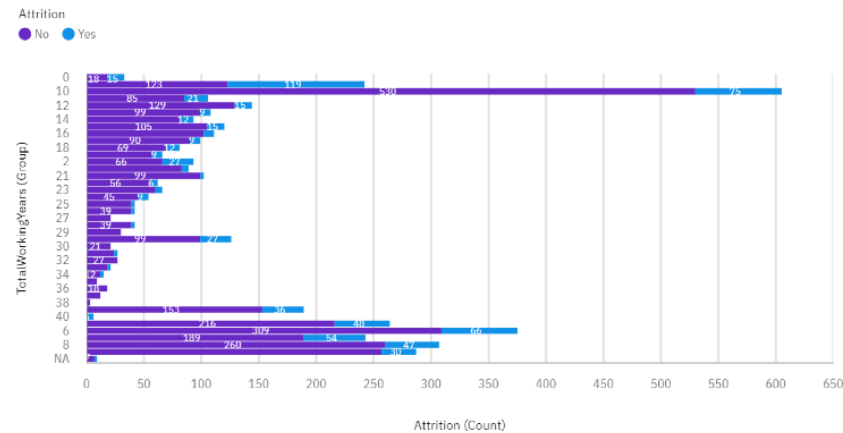


**Figure 9.7 Attrition Based on EmployeeWorking Groups**

This visualization shows the Employee Attrition Dashboard.

**Figure 9.8 Dashboard**

The user interface (UI) is the point of human-computer interaction and communication in a device.
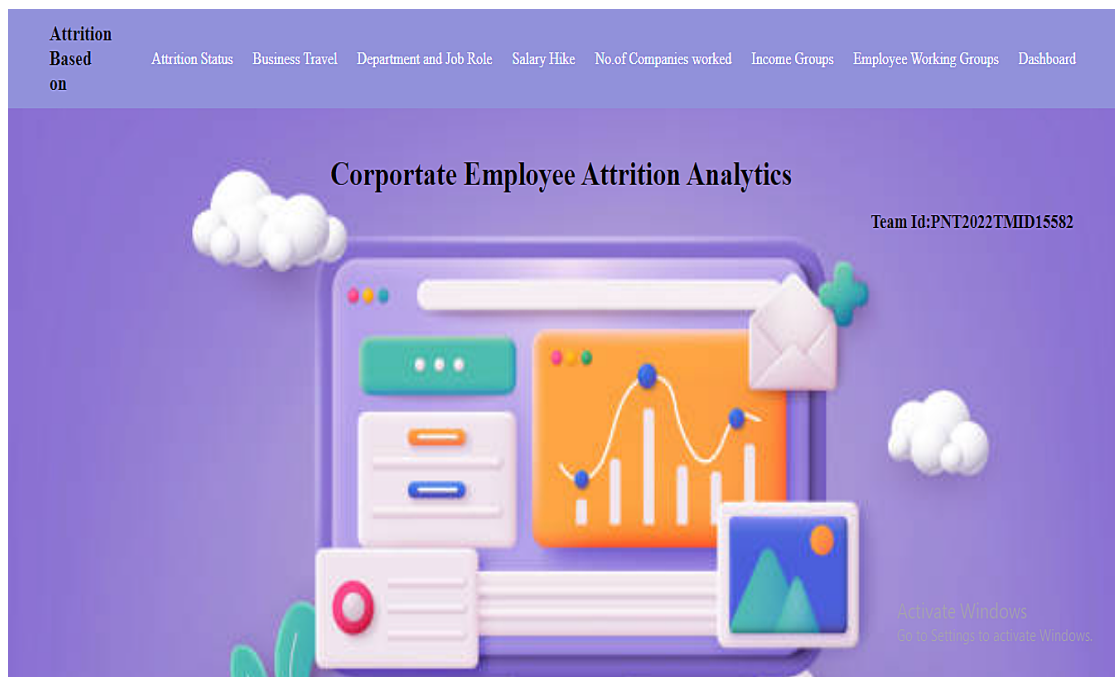


**Figure 9.9 User Interface**

# CHAPTER 10

# ADVANTAGES AND DISADVANTAGES

## Advantages

- If the supervisors or HR came to know about some employees that they will be planning to leave the company then they could get in touch with those employees which can help them to stay back or they can manage the workforce by hiring the new alternative of those employees.

- If all the employees in the current project are working continuously on a project, then the pipeline of that project will be smooth but if suppose one efficient asset ofthe project suddenly leave that company then the workflowwill be not sosmooth.

- Hiring Management: If HR of one particular projectcame to know about the employee who is willing to leave the company, then he/she can manage the number of hiring and they can get the valuable asset whenever they need so for the efficientflow of work.

- It brings to fore the cause of employee disengagement.

- Enables HR managersdevelop long-term strategies to reduce attrition.

- Competitive measures to enhance companybrand image.

- Develops and shapes drills that benefit both the management and theemployees.

- Enhanced work culture.

## Disadvantages

- One of the known facts about attrition is it cannot be eliminated from thecompany.
- It is a part of every organization as employees are free to leave theorganization.

# CHAPTER 11
# CONCLUSION

- The conclusion of Corporate Employee Attrition Analytics is finding a Balance. It's important to recognize that there are actually two types of attrition problems: too littleand too much.

- When considering attrition, many leaderstend to focus on the problem of highturnoverwith good reason.

- Recruiting, hiring, onboarding, and training new employee's costs businessesbillions each year. Companies also suffer productivity losses and lost profits when there is a large amountof continuous churn in the workforce.

- Top talent, in particular, can be very difficult and expensive to replace. The more talented the worker, the greater the consequences of attrition.

- Replacing an individual employee typically costs one-half to two times the worker's annual salary.

- Financial considerations aside, businesses are better off when they can retain good employees and the organizational knowledgethey possess.

- But too little attritioncan also be a problem.The right amountof attrition withtheright people turning over at the right time is desirable. Not every organization or every job is right for every person; if an employee who isn't the right fit or a low-performing employee leaves, there's an opportunity to fill the role with a high performer who is a betterfit for the job.

- Even if a good employee leaves as a result of "graduating" into a job with a client, if they become a great ambassador for the company,it can be a positiveloss.
- The goal with employee attrition and retention is to strike the right balance ofholding on to top talent while accepting that some level of attrition is healthy; employee attrition analytics enablesorganizations to find that balance.

# CHAPTER 12
# FUTURE SCOPE

- Most of the work we do in the field of people analytics is oriented to helping organizations understand what is most important to their employees, with thegoal of making improvements to increase employeeengagement and productivity, and reduce unwantedattrition.

- Employee attrition analytics is specifically focused on identifying why employees voluntarily leave, what might have prevented them from leaving, and how we can usedata to predict attritionrisk.

- Most importantly, this type of employee predictive analytics can be used to help organizations understand and design the interventions that will be most effective in reducing unwantedattrition.

- Over the past two years,this type of analytic practicehas become indispensable.

- Global labor marketshave swung dramatically due to the COVID-19pandemic.

- In addressing the ongoing challenges of the pandemic and the rise of remote work, employee attrition analytics will remain important to organizations seeking to retain top talent.

- Predictive analytics capability enables the design of an employee retention model to keep these valuable employees engaged and on board.

# CHAPTER 13

# APPENDIX

## 13.1 Code

**HTML**

```html
<!DOCTYPE html>
<html lang="en">
 <head>
  <meta charset="UTF-8" />
  <meta http-equiv="X-UA-Compatible" content="IE=edge" />
  <meta name="viewport" content="width=device-width, initial-scale=1.0" />
  <link rel="stylesheet" href="./css/style.css" />
  <title>Corportate Employee Attrition Analytics</title>
 </head>
 <body>
  <header class="main-header">
    <div class="main-header__brand">
       <h4>Attrition Based on</h4>
      </div>
    <nav class="navbar">
     <a
href="https://us3.ca.analytics.ibm.com/bi/?perspective=dashboard&id=i0833D86FB9824A07A0F3BFE491554113&objRef=i0833D86FB9824A07A0F3BFE491554113&options%5BdisableGlassPrefetch%5D=true&options%5Bcollections%5D%5BcanvasExtension%5D%5Bid%5D=com.ibm.bi.dashboard.canvasExtension&options%5Bcollections%5D%5BfeatureExtension%5D%5Bid%5D=com.ibm.bi.dashboard.core-features&options%5Bcollections%5D%5Bbuttons%5D%5Bid%5D=com.ibm.bi.dashboard.buttons&options%5Bcollections%5D%5Bwidget%5D%5Bid%5D=com.ibm.bi.dashboard.widgets&options%5Bcollections%5D%5Bcontent
```

FeatureExtension%5D%5Bid%5D=com.ibm.bi.dashboard.content-features&options%5Bcollections%5D%5BsaveServices%5D%5Bid%5D=com.ibm.bi.dashboard.saveServices&options%5Bcollections%5D%5Btemplates%5D%5Bid%5D=com.ibm.bi.dashboard.templates&options%5Bcollections%5D%5BvisualizationExtension%5D%5Bid%5D=com.ibm.bi.dashboard.visualizationExtensionCA&options%5Bcollections%5D%5BboardModel%5D%5Bid%5D=com.ibm.bi.dashboard.boardModelExtension&options%5Bcollections%5D%5BcontentTypes%5D%5Bid%5D=com.ibm.bi.dashboard.contentTypes&options%5Bcollections%5D%5BserviceExtension%5D%5Bid%5D=com.ibm.bi.dashboard.serviceExtension&options%5Bcollections%5D%5BlayoutExtension%5D%5Bid%5D=com.ibm.bi.dashboard.layoutExtension&options%5Bcollections%5D%5BcolorSetExtensions%5D%5Bid%5D=com.ibm.bi.dashboard.colorSetExtensions&options%5Bconfig%5D%5Bproduct%5D=CA&options%5Bconfig%5D%5BeditPropertiesLabel%5D=true&options%5Bconfig%5D%5BenableCustomVisualizations%5D=true&options%5Bconfig%5D%5BassetTags%5D%5B%5D=dashboard&options%5Bconfig%5D%5BfilterDock%5D=true&options%5Bconfig%5D%5BshowMembers%5D=true&options%5Bconfig%5D%5Bupgrades%5D=dashboard-core%2Fjs%2Fdashboard%2Fupgrades&options%5Bconfig%5D%5BassetType%5D=exploration&options%5Bconfig%5D%5BgeoService%5D=CA&options%5Bconfig%5D%5BsmartTitle%5D=true&options%5Bconfig%5D%5BnavigationGroupAction%5D=true&options%5Bconfig%5D%5BenableDataQuality%5D=false&options%5Bconfig%5D%5BmemberCalculation%5D=false&isAuthoringMode=false&boardId=i0833D86FB9824A07A0F3BFE491554113" target="__blank">Attrition Status</a>
        <a href="https://us3.ca.analytics.ibm.com/bi/?perspective=dashboard&id=i0833D86FB9824A07A0F3BFE491554113&objRef=i0833D86FB9824A07A0F3BFE491554113&options%5BdisableGlassPrefetch%5D=true&options%5Bcollections%5D%5BcanvasExtension%5D%5Bid%5D=com.ibm.bi.dashboard.canvasExtension&options%5Bcollections%5D%5BfeatureExtension%5D%5Bid%5D=com.ibm.bi.dashboard.core-

features&options%5Bcollections%5D%5Bbuttons%5D%5Bid%5D=com.ibm.bi.dashboard.buttons&options%5Bcollections%5D%5Bwidget%5D%5Bid%5D=com.ibm.bi.dashboard.widgets&options%5Bcollections%5D%5BcontentFeatureExtension%5D%5Bid%5D=com.ibm.bi.dashboard.content-features&options%5Bcollections%5D%5BsaveServices%5D%5Bid%5D=com.ibm.bi.dashboard.saveServices&options%5Bcollections%5D%5Btemplates%5D%5Bid%5D=com.ibm.bi.dashboard.templates&options%5Bcollections%5D%5BvisualizationExtension%5D%5Bid%5D=com.ibm.bi.dashboard.visualizationExtensionCA&options%5Bcollections%5D%5BboardModel%5D%5Bid%5D=com.ibm.bi.dashboard.boardModelExtension&options%5Bcollections%5D%5BcontentTypes%5D%5Bid%5D=com.ibm.bi.dashboard.contentTypes&options%5Bcollections%5D%5BserviceExtension%5D%5Bid%5D=com.ibm.bi.dashboard.serviceExtension&options%5Bcollections%5D%5BlayoutExtension%5D%5Bid%5D=com.ibm.bi.dashboard.layoutExtension&options%5Bcollections%5D%5BcolorSetExtensions%5D%5Bid%5D=com.ibm.bi.dashboard.colorSetExtensions&options%5Bconfig%5D%5Bproduct%5D=CA&options%5Bconfig%5D%5BeditPropertiesLabel%5D=true&options%5Bconfig%5D%5BenableCustomVisualizations%5D=true&options%5Bconfig%5D%5BassetTags%5D%5B%5D=dashboard&options%5Bconfig%5D%5BfilterDock%5D=true&options%5Bconfig%5D%5BshowMembers%5D=true&options%5Bconfig%5D%5Bupgrades%5D=dashboard-core%2Fjs%2Fdashboard%2Fupgrades&options%5Bconfig%5D%5BassetType%5D=exploration&options%5Bconfig%5D%5BgeoService%5D=CA&options%5Bconfig%5D%5BsmartTitle%5D=true&options%5Bconfig%5D%5BnavigationGroupAction%5D=true&options%5Bconfig%5D%5BenableDataQuality%5D=false&options%5Bconfig%5D%5BmemberCalculation%5D=false&isAuthoringMode=false&boardId=i0833D86FB9824A07A0F3BFE491554113" target="__blank">Business Travel</a>
    <a
href="https://us3.ca.analytics.ibm.com/bi/?perspective=dashboard&id=i0833D86FB9824A07A0F3BFE491554113&objRef=i0833D86FB9824A07A0F3BFE491554113&options%5BdisableGlassPrefetch%5D=true&options%5Bco

llections%5D%5BcanvasExtension%5D%5Bid%5D=com.ibm.bi.dashboard.canvasExtension&options%5Bcollections%5D%5BfeatureExtension%5D%5Bid%5D=com.ibm.bi.dashboard.core-features&options%5Bcollections%5D%5Bbuttons%5D%5Bid%5D=com.ibm.bi.dashboard.buttons&options%5Bcollections%5D%5Bwidget%5D%5Bid%5D=com.ibm.bi.dashboard.widgets&options%5Bcollections%5D%5BcontentFeatureExtension%5D%5Bid%5D=com.ibm.bi.dashboard.content-features&options%5Bcollections%5D%5BsaveServices%5D%5Bid%5D=com.ibm.bi.dashboard.saveServices&options%5Bcollections%5D%5Btemplates%5D%5Bid%5D=com.ibm.bi.dashboard.templates&options%5Bcollections%5D%5BvisualizationExtension%5D%5Bid%5D=com.ibm.bi.dashboard.visualizationExtensionCA&options%5Bcollections%5D%5BboardModel%5D%5Bid%5D=com.ibm.bi.dashboard.boardModelExtension&options%5Bcollections%5D%5BcontentTypes%5D%5Bid%5D=com.ibm.bi.dashboard.contentTypes&options%5Bcollections%5D%5BserviceExtension%5D%5Bid%5D=com.ibm.bi.dashboard.serviceExtension&options%5Bcollections%5D%5BlayoutExtension%5D%5Bid%5D=com.ibm.bi.dashboard.layoutExtension&options%5Bcollections%5D%5BcolorSetExtensions%5D%5Bid%5D=com.ibm.bi.dashboard.colorSetExtensions&options%5Bconfig%5D%5Bproduct%5D=CA&options%5Bconfig%5D%5BeditPropertiesLabel%5D=true&options%5Bconfig%5D%5BenableCustomVisualizations%5D=true&options%5Bconfig%5D%5BassetTags%5D%5B%5D=dashboard&options%5Bconfig%5D%5BfilterDock%5D=true&options%5Bconfig%5D%5BshowMembers%5D=true&options%5Bconfig%5D%5Bupgrades%5D=dashboard-core%2Fjs%2Fdashboard%2Fupgrades&options%5Bconfig%5D%5BassetType%5D=exploration&options%5Bconfig%5D%5BgeoService%5D=CA&options%5Bconfig%5D%5BsmartTitle%5D=true&options%5Bconfig%5D%5BnavigationGroupAction%5D=true&options%5Bconfig%5D%5BenableDataQuality%5D=false&options%5Bconfig%5D%5BmemberCalculation%5D=false&isAuthoringMode=false&boardId=i0833D86FB9824A07A0F3BFE491554113" target="__blank">Department and Job Role</a>
    <a

href="https://us3.ca.analytics.ibm.com/bi/?perspective=dashboard&id=i5E63DF5BAA2844EBB47E764CD5F5CE90&objRef=i5E63DF5BAA2844EBB47E764CD5F5CE90&options%5BdisableGlassPrefetch%5D=true&options%5Bcollections%5D%5BcanvasExtension%5D%5Bid%5D=com.ibm.bi.dashboard.canvasExtension&options%5Bcollections%5D%5BfeatureExtension%5D%5Bid%5D=com.ibm.bi.dashboard.core-features&options%5Bcollections%5D%5Bbuttons%5D%5Bid%5D=com.ibm.bi.dashboard.buttons&options%5Bcollections%5D%5Bwidget%5D%5Bid%5D=com.ibm.bi.dashboard.widgets&options%5Bcollections%5D%5BcontentFeatureExtension%5D%5Bid%5D=com.ibm.bi.dashboard.content-features&options%5Bcollections%5D%5BsaveServices%5D%5Bid%5D=com.ibm.bi.dashboard.saveServices&options%5Bcollections%5D%5Btemplates%5D%5Bid%5D=com.ibm.bi.dashboard.templates&options%5Bcollections%5D%5BvisualizationExtension%5D%5Bid%5D=com.ibm.bi.dashboard.visualizationExtensionCA&options%5Bcollections%5D%5BboardModel%5D%5Bid%5D=com.ibm.bi.dashboard.boardModelExtension&options%5Bcollections%5D%5BcontentTypes%5D%5Bid%5D=com.ibm.bi.dashboard.contentTypes&options%5Bcollections%5D%5BserviceExtension%5D%5Bid%5D=com.ibm.bi.dashboard.serviceExtension&options%5Bcollections%5D%5BlayoutExtension%5D%5Bid%5D=com.ibm.bi.dashboard.layoutExtension&options%5Bcollections%5D%5BcolorSetExtensions%5D%5Bid%5D=com.ibm.bi.dashboard.colorSetExtensions&options%5Bconfig%5D%5Bproduct%5D=CA&options%5Bconfig%5D%5BeditPropertiesLabel%5D=true&options%5Bconfig%5D%5BenableCustomVisualizations%5D=true&options%5Bconfig%5D%5BassetTags%5D%5B%5D=dashboard&options%5Bconfig%5D%5BfilterDock%5D=true&options%5Bconfig%5D%5BshowMembers%5D=true&options%5Bconfig%5D%5Bupgrades%5D=dashboard-core%2Fjs%2Fdashboard%2Fupgrades&options%5Bconfig%5D%5BassetType%5D=exploration&options%5Bconfig%5D%5BgeoService%5D=CA&options%5Bconfig%5D%5BsmartTitle%5D=true&options%5Bconfig%5D%5BnavigationGroupAction%5D=true&options%5Bconfig%5D%5BenableDataQuality%5D=false&options%5Bconfig%5D%5BmemberCalculation%5D=false&isAutho

ringMode=false&boardId=i5E63DF5BAA2844EBB47E764CD5F5CE90"
target="_blank">Salary Hike</a>

    <a
href="https://us3.ca.analytics.ibm.com/bi/?perspective=dashboard&id=i5E
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features&options%5Bcollections%5D%5BsaveServices%5D%5Bid%5D=com
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e&options%5Bconfig%5D%5BshowMembers%5D=true&options%5Bconfig%
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core%2Fjs%2Fdashboard%2Fupgrades&options%5Bconfig%5D%5BassetTy
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tionGroupAction%5D=true&options%5Bconfig%5D%5BenableDataQuality%5
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target="__blank">No.of Companies worked</a>
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href="https://us3.ca.analytics.ibm.com/bi/?perspective=dashboard&id=i5E
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features&options%5Bcollections%5D%5Bbuttons%5D%5Bid%5D=com.ibm.
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.bi.dashboard.serviceExtension&options%5Bcollections%5D%5BlayoutExte
nsion%5D%5Bid%5D=com.ibm.bi.dashboard.layoutExtension&options%5Bc
ollections%5D%5BcolorSetExtensions%5D%5Bid%5D=com.ibm.bi.dashboar
d.colorSetExtensions&options%5Bconfig%5D%5Bproduct%5D=CA&options
%5Bconfig%5D%5BeditPropertiesLabel%5D=true&options%5Bconfig%5D%5
BenableCustomVisualizations%5D=true&options%5Bconfig%5D%5BassetT
ags%5D%5B%5D=dashboard&options%5Bconfig%5D%5BfilterDock%5D=tru
e&options%5Bconfig%5D%5BshowMembers%5D=true&options%5Bconfig%

5D%5Bupgrades%5D=dashboard-
core%2Fjs%2Fdashboard%2Fupgrades&options%5Bconfig%5D%5BassetTy
pe%5D=exploration&options%5Bconfig%5D%5BgeoService%5D=CA&option
s%5Bconfig%5D%5BsmartTitle%5D=true&options%5Bconfig%5D%5Bnaviga
tionGroupAction%5D=true&options%5Bconfig%5D%5BenableDataQuality%5
D=false&options%5Bconfig%5D%5BmemberCalculation%5D=false&isAutho
ringMode=false&boardId=i5E63DF5BAA2844EBB47E764CD5F5CE90"
target="_blank">Income Groups</a>
        <a
href="https://us3.ca.analytics.ibm.com/bi/?perspective=dashboard&id=i5E
63DF5BAA2844EBB47E764CD5F5CE90&objRef=i5E63DF5BAA2844EBB47
E764CD5F5CE90&options%5BdisableGlassPrefetch%5D=true&options%5B
collections%5D%5BcanvasExtension%5D%5Bid%5D=com.ibm.bi.dashboard
.canvasExtension&options%5Bcollections%5D%5BfeatureExtension%5D%5
Bid%5D=com.ibm.bi.dashboard.core-
features&options%5Bcollections%5D%5Bbuttons%5D%5Bid%5D=com.ibm.
bi.dashboard.buttons&options%5Bcollections%5D%5Bwidget%5D%5Bid%5
D=com.ibm.bi.dashboard.widgets&options%5Bcollections%5D%5Bcontent
FeatureExtension%5D%5Bid%5D=com.ibm.bi.dashboard.content-
features&options%5Bcollections%5D%5BsaveServices%5D%5Bid%5D=com
.ibm.bi.dashboard.saveServices&options%5Bcollections%5D%5Btemplates
%5D%5Bid%5D=com.ibm.bi.dashboard.templates&options%5Bcollections%
5D%5BvisualizationExtension%5D%5Bid%5D=com.ibm.bi.dashboard.visuali
zationExtensionCA&options%5Bcollections%5D%5BboardModel%5D%5Bid
%5D=com.ibm.bi.dashboard.boardModelExtension&options%5Bcollections
%5D%5BcontentTypes%5D%5Bid%5D=com.ibm.bi.dashboard.contentTypes
&options%5Bcollections%5D%5BserviceExtension%5D%5Bid%5D=com.ibm
.bi.dashboard.serviceExtension&options%5Bcollections%5D%5BlayoutExte
nsion%5D%5Bid%5D=com.ibm.bi.dashboard.layoutExtension&options%5Bc
ollections%5D%5BcolorSetExtensions%5D%5Bid%5D=com.ibm.bi.dashboar
d.colorSetExtensions&options%5Bconfig%5D%5Bproduct%5D=CA&options
%5Bconfig%5D%5BeditPropertiesLabel%5D=true&options%5Bconfig%5D%5

BenableCustomVisualizations%5D=true&options%5Bconfig%5D%5BassetTags%5D%5B%5D=dashboard&options%5Bconfig%5D%5BfilterDock%5D=true&options%5Bconfig%5D%5BshowMembers%5D=true&options%5Bconfig%5D%5Bupgrades%5D=dashboard-core%2Fjs%2Fdashboard%2Fupgrades&options%5Bconfig%5D%5BassetType%5D=exploration&options%5Bconfig%5D%5BgeoService%5D=CA&options%5Bconfig%5D%5BsmartTitle%5D=true&options%5Bconfig%5D%5BnavigationGroupAction%5D=true&options%5Bconfig%5D%5BenableDataQuality%5D=false&options%5Bconfig%5D%5BmemberCalculation%5D=false&isAuthoringMode=false&boardId=i5E63DF5BAA2844EBB47E764CD5F5CE90"
target="__blank">Employee Working Groups</a>
        <a
href="https://us3.ca.analytics.ibm.com/bi/?perspective=dashboard&id=i5E63DF5BAA2844EBB47E764CD5F5CE90&objRef=i5E63DF5BAA2844EBB47E764CD5F5CE90&options%5BdisableGlassPrefetch%5D=true&options%5Bcollections%5D%5BcanvasExtension%5D%5Bid%5D=com.ibm.bi.dashboard.canvasExtension&options%5Bcollections%5D%5BfeatureExtension%5D%5Bid%5D=com.ibm.bi.dashboard.core-features&options%5Bcollections%5D%5Bbuttons%5D%5Bid%5D=com.ibm.bi.dashboard.buttons&options%5Bcollections%5D%5Bwidget%5D%5Bid%5D=com.ibm.bi.dashboard.widgets&options%5Bcollections%5D%5BcontentFeatureExtension%5D%5Bid%5D=com.ibm.bi.dashboard.content-features&options%5Bcollections%5D%5BsaveServices%5D%5Bid%5D=com.ibm.bi.dashboard.saveServices&options%5Bcollections%5D%5Btemplates%5D%5Bid%5D=com.ibm.bi.dashboard.templates&options%5Bcollections%5D%5BvisualizationExtension%5D%5Bid%5D=com.ibm.bi.dashboard.visualizationExtensionCA&options%5Bcollections%5D%5BboardModel%5D%5Bid%5D=com.ibm.bi.dashboard.boardModelExtension&options%5Bcollections%5D%5BcontentTypes%5D%5Bid%5D=com.ibm.bi.dashboard.contentTypes&options%5Bcollections%5D%5BserviceExtension%5D%5Bid%5D=com.ibm.bi.dashboard.serviceExtension&options%5Bcollections%5D%5BlayoutExtension%5D%5Bid%5D=com.ibm.bi.dashboard.layoutExtension&options%5Bc

ollections%5D%5BcolorSetExtensions%5D%5Bid%5D=com.ibm.bi.dashboar
d.colorSetExtensions&options%5Bconfig%5D%5Bproduct%5D=CA&options
%5Bconfig%5D%5BeditPropertiesLabel%5D=true&options%5Bconfig%5D%5
BenableCustomVisualizations%5D=true&options%5Bconfig%5D%5BassetT
ags%5D%5B%5D=dashboard&options%5Bconfig%5D%5BfilterDock%5D=tru
e&options%5Bconfig%5D%5BshowMembers%5D=true&options%5Bconfig%
5D%5Bupgrades%5D=dashboard-
core%2Fjs%2Fdashboard%2Fupgrades&options%5Bconfig%5D%5BassetTy
pe%5D=exploration&options%5Bconfig%5D%5BgeoService%5D=CA&option
s%5Bconfig%5D%5BsmartTitle%5D=true&options%5Bconfig%5D%5Bnaviga
tionGroupAction%5D=true&options%5Bconfig%5D%5BenableDataQuality%5
D=false&options%5Bconfig%5D%5BmemberCalculation%5D=false&isAutho
ringMode=false&boardId=i5E63DF5BAA2844EBB47E764CD5F5CE90">Das
hboard</a>
    </nav>
  </header>
  <main class="product-overview">
    <div class="content">
      <h1>Corportate Employee Attrition Analytics</h1>
    </div>
    <div class="team">
      <h3>Team Id:PNT2022TMID15582</h3>
      <span></span>
    </div>
  </main>
 </body>
</html>

**CSS**

```css
* {
  margin: 0;
  padding: 0;
  box-sizing: border-box;
}

html {
  font-family: "Belleza";
}

body {
  background-color: #f1f1f1;
}

.main-header__brand {
  width: 50px;
  height: 25x;
}

.main-header__brand h4 {
  font-size: 20px;
}

.main-header {
  width: 100%;
  height: 93px;
  background-color: rgb(145, 145, 218);
  padding: 28px 50px;
  display: flex;
  align-items: center;
  justify-content: space-between;
```

```css
  z-index: 1000;
}
header .navbar a {
  font-size: 16px;
  color: white;
  padding: 10px;
  text-decoration: none;
}

.product-overview {
  display: flex;
  align-items: center;
  width: 100%;
  height: 766px;
  background: url(../images/background.jpg);
  background-color: white;
  background-repeat: no-repeat;
  background-size: cover;
  background-position: center;
}

.content {
  position: relative;
  bottom: 323px;
  left: 389px;
}

.team {
  position: relative;
  bottom: 278px;
  left: 484px;
}
```

## 13.2 GitHub and ProjectDemo Link

GitHub Link

https://github.com/IBM-EPBL/IBM-Project-21089-1659772023

Project Demo Link

https://drive.google.com/file/d/1H4nlX4-5XHLdDXVSVwa1yjJpLkSuNKhV/view?usp=share_link%09