



ANALYTICS TOOL FOR PLACEMENTS



NAAN MUDHALVAN

PROJECT REPORT

Submitted By

KOKILA VANI 611220104308

NISHANTHINI L 611220104310

GOKUL B 611220104305

BHARATH R 611220104302

*in partial fulfilment for the award of the
degree of*

BACHELOR OF ENGINEERING

in

COMPUTER SCIENCE AND ENGINEERING

**KNOWLEDGE INSTITUTE OF
TECHNOLOGY,**

SALEM-637504

ANNA UNIVERSITY::CHENNAI 600 025

OCTOBER 2023



ANALYTICS TOOL FOR PLACEMENTS



NAAN MUDHALVAN PROJECT REPORT

Submitted By

KOKILA VANI	611220104308
NISHANTHINI L	611220104310
GOKUL B	611220104305
BHARATH R	611220104302

*in partial fulfilment for the award of the
degree of*

BACHELOR OF ENGINEERING

in

COMPUTER SCIENCE AND ENGINEERING

**KNOWLEDGE INSTITUTE OF
TECHNOLOGY,
SALEM-637504**

ANNA UNIVERSITY::CHENNAI 600 025

OCTOBER 2023

BONAFIDE CERTIFICATE

Certified that this project report titled “**ANALYTICS TOOL FOR PLACEMENTS**” is the bonafide work of “**KOKILA VANI V (611220104308), NISHANTHINI L (611220104310), GOKUL B (611220104305), BHARATH R (611220104302)**” who carried out the project work under my supervision.

SIGNATURE

Dr. V. KUMAR M.E., Ph.D.,

HEAD OF THE DEPARTMENT

PROFESSOR

Department of Computer Science
and Engineering,
Knowledge Institute of Technology,
Kakapalayam,
Salem- 637 504.

SIGNATURE

Mr. M. GOPIKUMARAN, B.Tech., M.E

FACULTY MENTOR

ASSISTANT PROFESSOR

Department of Computer Science
and Business System
Knowledge Institute of Technology,
Kakapalayam,
Salem- 637 504.

SPOC

HEAD OF THE DEPARTMENT

ACKNOWLEDGEMENT

At the outset, we express our heartfelt gratitude to **GOD**, who has been our strength to bring this project to light.

At this pleasing moment of having successfully completed our project, we wish to convey our sincere thanks and gratitude to our beloved president **Mr. C. Balakrishnan**, who has provided all the facilities to us.

We would like to convey our sincere thanks to our beloved Principal **Dr. PSS. Srinivasan**, for forwarding us to do our project and offering adequate duration in completing our project.

We express our sincere thanks to our Head of the Department **Dr. V. Kumar**, Department of Computer Science and Engineering for fostering the excellent academic climate in the Department.

We express our pronounced sense of thanks with deepest respect and gratitude to our Faculty Mentor **Mr. M. Gopikumaran**, Assistant Professor Department of Computer Science and Business System for their valuable and precious guidance and for having amicable relation.

With deep sense of gratitude, we extend our earnest and sincere thanks to our SPOC **Mr. T. Karthikeyan**, Assistant Professor, Department of Computer Science and Engineering for his guidance and encouragement during this project.

We would also like express our thanks to all the faculty members of our Department, friends and students who helped us directly and indirectly in all aspects of the project work to get completed successfully.

TABLE OF CONTENTS

CHAPTER NO.	TITLE	PAGE NO.
	ABSTRACT	I
	LIST OF FIGURES	II
	LIST OF ABBREVIATIONS	III
1	INTRODUCTION	1
	1.1 PROJECT OVERVIEW	1
	1.2 PURPOSE	2
2	LITERATURE SURVEY	3
3	IDEATION & PROPOSED SOLUTION	9
	3.1 PROBLEM STATEMENT DEFINITION	9
	3.2 EMPATHY MAP CANVAS	10
	3.3 IDEATION & BRAINSTORMING	12
	3.4 PROPOSED SOLUTION	14
4	REQUIREMENT ANALYSIS	16
	4.1 FUNCTIONAL REQUIREMENTS	16
	4.2 NON-FUNCTIONAL REQUIREMENTS	17
5	PROJECT DESIGN	18
	5.1 DATA FLOW DIAGRAMS	18
	5.2 SOLUTION & TECHNICAL ARCHITECTURE	19
	5.3 USER STORIES	21

6	CODING & SOLUTIONING	25
6.1	FEATURE 1	25
6.2	FEATURE 2	26
7	RESULTS	30
7.1	PERFORMANCE MATRICS	30
8	ADVANTAGES & DISADVANTAGES	37
9	CONCLUSION	39
10	FUTURE SCOPE	40
11	APPENDIX	41
11.1	SOURCE CODE & SCREENSHOTS	41
11.2	GITHUB & PROJECT VIDEO DEMO LINK	44
12	REFERENCES	45

ABSTRACT

ABSTRACT

In the current competitive employment market, both companies and educational institutions are looking for creative solutions to streamline the placement process. An innovative analytics solution that aims to transform the placement process and enhance employer satisfaction as well as student outcomes is presented in this abstract. Utilising machine learning, predictive modelling, and data analytics, our application expedites the placement procedure. It matches career openings with qualified applicants by utilising student profiles, company preferences, and placement history. Our technology attempts to dramatically boost the likelihood of successful job placements by taking into account variables including academic performance, talents, and personal preferences. Employers can gain useful data from the application in addition to students and educational institutions. Employers can cut down on the time and effort needed for recruitment by accessing a pool of highly skilled applicants that are suited to their particular needs. The main characteristics and advantages of our analytics tool are described in this abstract, along with how it can change the way student placements are made and improve efficiency and effectiveness for all parties involved. The whole study will explore this transformative tool's technical details, case studies, and practical applications in more detail.

LIST OF FIGURES

FIGURE	NAME OF FIGURES	PAGE
NO		NO
3.2	EMPATHY MAP	11
3.3.1	IDEATION & BRAINSTORMING	12
3.3.2	IDEATION & BRAINSTORMING	13
5.1.1	DATA FLOW DIAGRAM	19
5.2.2	SOLUTION & TECHNICAL ARCHITECTURE	39

LIST OF ABBREVIATIONS

ABBREVIATIONS	EXPANSIONS
CSV	Comma-Separated
OTP	One-Time Password
CGPA	Cumulative Grade Point Average
ERP	Enterprise Resource Planning
SAT	Scholastic Resource Planning
SVM	Super Vector Machine
EAP	Equality Action Plan

CHAPTER-1

1.INTRODUCTION

1.1 PROJECT OVERVIEW

The goal of this research is to perform predictive analysis in order to obtain deep insights into the factors influencing students' outcomes regarding campus placement. The dataset provides an excellent resource for understanding the complexities of college recruitment, as it includes information on students' academic performance, demographics, work experience, and current placement status. The main goal is to provide insightful information on the variables influencing campus placement results so that academic institutions, recruiters, and students may make educated choices. By utilising exploratory data analysis and predictive modelling, this project aims to analyse the dynamics of campus recruitment and provide practical advice for improving placement rates and salary negotiations. By harnessing the potential of data analytics, we seek to address key challenges in the placement ecosystem, such as optimizing job-matching, predicting market trends, and ensuring a higher success rate for candidates and organizations alike. This tool will provide real-time analytics, personalized recommendations, and valuable insights to foster better decision-making.

1.2 PURPOSE

The purpose of this study is to better understand the variables influencing students' results for campus placement by applying predictive modelling and data analysis approaches. The project looks at data on placement status, work experience, demographics, and academic performance in order to give recruiters, educational institutions, and students useful information. These data can guide decision-making processes, supporting academic institutions in increasing placement rates, helping recruiters make more informed hiring decisions, and assisting students in selecting careers. The ultimate goal is to improve the results and the entire campus recruitment process for all parties concerned.

CHAPTER-2

2. LITERATURE SURVEY

Predictive Analytics for Placement of Student- A Comparative Study

Classification is used to classify each data item into one of the predicted target class or group and to accurately predict categorical labels. Classification uses classification models to predict the class label. Using a set of predefined classes, class label of each object is determined. Training set is provided as an input to algorithm to build model, which can be used for classification of new object. For example, a bank starts credit policy for his customers; manager by the behavior of customer can classify them under three categories: “safe”, “risky”, “very risky”. So classification will help us to draw a model that could be used to accept or reject future request for the credits.

A Comparative Study On Students Placement Performance Using Data Mining Algorithms

In recent days, the prediction of unemployment becomes a major and critical issue since it helps the government to take decision and policies that can improve the rate of employment. The prediction of unemployment offers various giants to learn about the upcoming trends related to economics. Forecasting of unemployment receives huge attention from many organizations, governments, research institutes and also research scholars. Many methods have been applied to predict/forecast students‘ placement performance. This paper discusses the comparative analysis on students‘ placement performance using different types of data mining algorithms and also describes the processes involved in the educational data mining.

STUDENT PLACEMENT PREDICTION USING MACHINE LEARNING

All students dream to obtain a job offer in their hands before they leave their college. A placement chance predictor helps students to have an idea about where they stand and what to be done to obtain a good placement. A placement predictor is a system that could predict the possibility or the type of company a pre-final year student have chances to be placed. Thus a prediction system could help in the academic planning of an institution for future years. With the emergence of data mining and machine learning, many predictor models were introduced by analyzing the previous year student's dataset. This paper presents a literature survey on different placement prediction models for pre-final year engineering graduate students. [1] J. Luan, "Data mining and its applications in higher education", New Dir. Inst. Res, 113:17–36, 2002. [2] A.S. Sharma, S. Prince, S. Kapoor, K. Kumar, "PPS – Placement prediction system using logistic regression", IEEE international conference on MOOC, innovation and technology in education (MITE), pp 337-341,2014. [3] Thangavel, S.Bkaratki, P. Sankar, "Student placement analyzer: A recommendation system using machine learning", Advances in Computing and Communication Systems (ICACCS-2017) International Conference on. IEEE, 2017. [4] R. Sangha, A. Satras, L. Swamy, G. Deshmukh, "Students Placement Eligibility Prediction using Fuzzy Approach", International Journal of Engineering and Techniques , Volume 2, Issue 6, Dec 2016

Review on Predictive Analysis of Placement of Students Using Machine Learning Algorithms

Machine learning is an emerging trend which has proven to learn automatically from past data. Machine learning can be performed using various ways like supervised, unsupervised, reinforcement learning. Machine learning where system computer system learning from the data set available. Machine learning using supervised learning can be performed using either regression or classifier algorithms. In this research paper we have worked on machine learning algorithms which are SVM, Decision Tree, Logistic regression and Random Forest. Using Machine learning algorithms we can build mathematical model and make the predictions using dataset. To make prediction we can go for supervised learning where output will be in the form either yes or No, 0 or 1, in this case either student placed or not placed. According to T. Jeevalatha et al., predicting placement of a student requires lot of parameters to be considered. Personal, Social, Psychological and other variables required for effective prediction of placement of a student. They have worked on decision tree algorithms like ID3, C4.5, and CART. Data preprocessing is required as poor quality of raw data affects the data mining efficiency. Total samples (student details) collected were 1342 and unnecessary columns like residential address removed. Results calculated in the form of recall, precision, accuracy. From the result it is found that ID3 algorithm is appropriate for prediction of placement of student. Efficiency of various decision tree algorithms analyzed and ID3 algorithm provided 95.33% accuracy which was higher than other s [1]. According to Dr. B. Muthusenthil et al., they had dataset of 185 students (2018 and 2019 pass out) to improve the accuracy score. They studied algorithms like Linear regression, Decision tree, KNN, Logistic regression and Lasso regression [2]. According to Cong Yu Cai, Huijuan Lu et al., They have worked on linear regression model, Kneighbor regression model, decision tree regression model, XGBoost regression model, gradient boost regression model, light GBM regression model and random tree classifier model [3]. According to Tadi Aravind, placement analysis performed using 2 different

datasets. One with simple data and second one is with additional features of students. Root mean square error considered for the study [4]. According to Chandrasekhar Kumbhar, Dr. S. S. Sridhar, they have worked on decision tree, Neural network and Support vector machine algorithms. A dataset has 50 entries in which we have considered 37 entries for training purpose and 13 for testing [5]. According to Athreya Shetty B et al., After many experimentation and research we have found out the most efficient machine learning model suited for the task with comparison to many other machine learning prediction algorithms (Decision Tree) [6].

PREDICTION OF STUDENT PLACEMENT USING MACHINE LEARNING ALGORITHM

Traditionally, data analysis was trial and error-based, an approach that becomes impossible when data sets are large and heterogeneous. Machine Learning being a part of data science provides quick-witted substitutes for exploring enormous mass of data. By growing rapid and well organized algorithms and data-driven models for actual-time processing of data. The purpose of institutions is to provide golden opportunities to their students. Linear Regression, a tool of supervised machine learning can contribute its features to serve this purpose. It is an effective method helping in predicting future trend of student placement based on advance placement practice test marks. The result obtained from this will help the students to better understand their weak areas to work upon. Working on these areas will let students achieve higher number of placements in an institution.

K. Sreenivasa Rao presented a paper in which using education data mining students performance is predicted based on various parameters[1]. Predictions are made using machine learning algorithm in weka tool and R studio. Syed Ahmed propose a TPO management system from an existing system[2]. The objective is to analyze previous year's student's historical data and predict placement eligibility of the current students and the percentage placement chance of the institution. They used Decision tree C4.5 Algorithm. Equity Action Plan (EAP): The objective of the Equity Action Plan is to ensure that all students and faculty in the project institutions have equal opportunity to avail of the benefits of the project with substantial improvement in the performance of weak students[3]. Satish Kumar's objective is to study the nature of campus placements which is useful for both Students and Institution[4]. Also to Build a model that can be used to predict the probability that a randomly chosen student will be placed or not. To Identity the factors that are influencing the placement chance of a student in technical education. They used binary logistic regression. R. Rajalaxmi's objective of the paper is to use linear regression techniques to build a model which predicts the performance of the students in Engineering Discipline[5]. The output or dependent variable is the prediction of end semester examination grades i.e. CGPA (Cumulative Grade Points). Pothuganti Manvitha's the objective is to analyze previous year's student's data and use it to predict the placement chance of the current students[6]. This proposed model is also compared with other traditional classification algorithms such as Decision tree and Random forest with respect to accuracy, precision and recall. Ajay Kumar Pal's study presents a proposed model based on classification approach to find an enhanced evaluation method for predicting the placement for students[7]. This model can determine the relations between academic achievement of students and their placement in campus selection. Shreyas Harinath's paper presents a recommendation system that predicts whether the current student will be placed or not, if the student is placed the company is also predicted based on the data of previously placed students[8]. Here two different machine learning classification algorithms, namely Naive Bayes Classifier and KNearest Neighbors [KNN] algorithm are used.

The placement prediction portrayed in this paper is according to the following diagram. The collected dataset of final year students consist of parameters like stud_id, name, course, performance in class, cgpa, marks of advance placement practice test etc. Out of which the data's which are not contributing to this paper had been abolished.

IDEATION AND PROPOSED SOLUTION

CHAPTER-3

3. IDEATION AND PROPOSED SOLUTION

3.1 PROBLEM STATEMENT DEFINITION

Problem Statement (PS)	I am (Customer)	I'm trying to	But	Because	Which makes me feel
PS-1	Educational Institutions	Educational institutions use placement analytics tools to track the success of their graduates of employee.	Often, they relied on manual tracking, which was time-consuming and error-prone.	They lacked insights into the factors influencing placement success.	Stressed and unsafe
PS-2	Recruiters/ Companies	Recruiters use these tools to identify suitable candidates for job openings	Without such tools, they may have struggled to efficiently match candidates to positions	Track recruitment metrics effectively.	Anxious and worried About the potential for accidents
PS-3	Job Seekers	Job seekers use placement analytics tools to explore job market trends, identify in-demand skills	Before using these tools, job seekers often lacked access to comprehensive job market data	which made it challenging to make informed career decisions.	Concerned about their safety and the potential for injuries

3.2 EMPATHY MAP CANVAS

An empathy map is a simple, easy-to-digest visual that captures knowledge about a user's behaviours and attitudes. It is a useful tool to help teams better understand their users. Creating an effective solution requires understanding the true problem and the person who is experiencing it. The exercise of creating the map helps participants consider things from the user's perspective along with his or her goals and challenges.

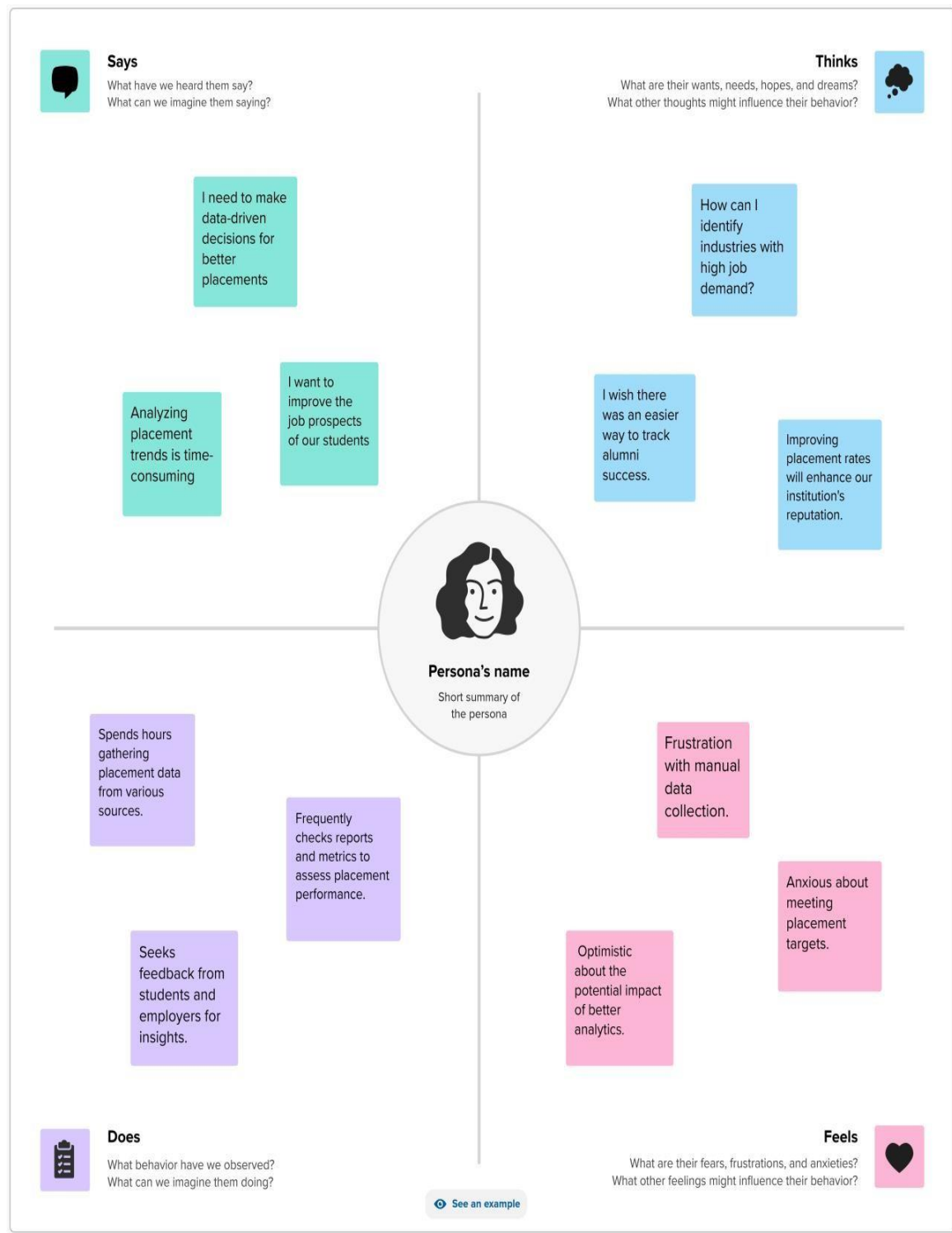



Fig-3.2.1 EMPATHY MAP

3.3 IDEATION & BRAINSTROMING

Brainstorming provides a free and open environment that encourages everyone within a team to participate in the creative thinking process that leads to problem solving. Prioritizing volume over value, out-of-the-box ideas are welcome and built upon, and all participants are encouraged to collaborate, helping each other develop a rich amount of creative solutions. Use this template in your own brainstorming sessions so your team can unleash their imagination and start shaping concepts even if you're not sitting in the same room


Template



Brainstorm & Idea prioritization

Use this template in your own brainstorming sessions so you can unleash their imagination and start shaping concepts even if you're not sitting in the same room.

- 1. 10 minutes to a task
- 2. 1 week to 10 days
- 3. 20 people to 1000



Read more

10 minutes to a task
1 week to 10 days
20 people to 1000

Get started

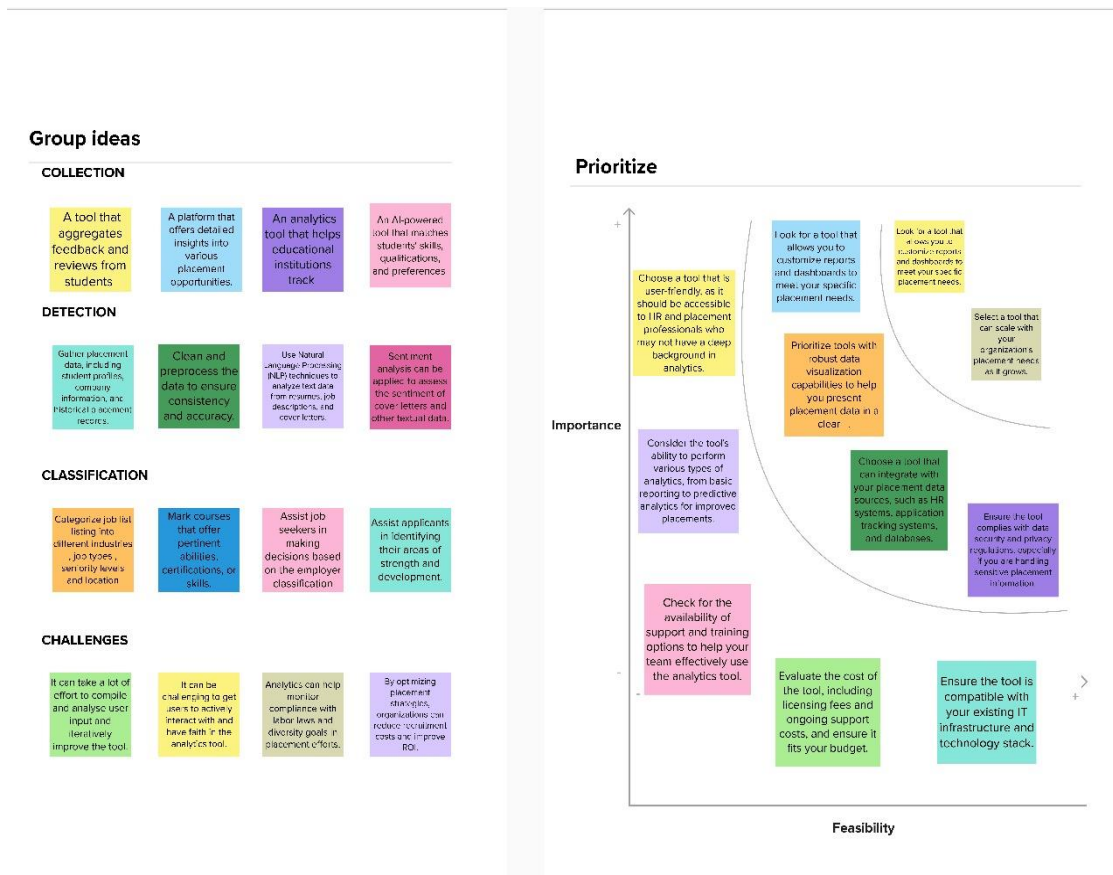
Problem Statement

Create an advanced analytics tool for educational institutions or job placement agencies to revolutionize their placement process by effectively managing diverse data, implementing a cutting-edge matching algorithm, monitoring placement performance, generating customizable reports, employing predictive analytics, offering an intuitive user interface, ensuring data privacy, accommodating scalability, incorporating feedback channels, and achieving cost-effectiveness. The core objective is to significantly enhance placement success rates, streamline job-student matching, and provide an integrated solution that maximizes efficiency and effectiveness while adhering to security and budgetary constraints.

Brainstorm solo

Nishanthini L	Kokila vani V
Clearly state the analytics tool's objective.	Determine the target audience is, whether it be career counselors, educational institutions, job seekers, or students.
Decide what kinds of data you'll need to offer insightful analysis.	To comprehend users' needs, preferences, and create user personas.
Gokul B	Bharath R
Install the analytics program on a dependable cloud computing platform.	Develop a marketing plan to present the tool to your intended market.
Keep an eye on performance and deal with problems when they appear.	Emphasize the elements that set it apart and the value it provides.
	Create the tool's front end so that people may interact with it.
	To make sure the tool can manage a sizable number of users, do load testing.

3.3.1 BRAINSTORMING & IDEA PRIORITIZATIN



3.3.2 BRAINSTORMING & IDEA PRIORITIZATIN

3.4 Proposed Solution

S.No.	Parameter	Description
1.	Placement Success Rate	This parameter measures the percentage of graduates who secure jobs in their respective fields. It helps educational institutions assess the effectiveness of their programs and provides job seekers with insights into their prospects.
2.	Skill Demand Analysis	Analyzing the demand for specific skills in the job market, this parameter helps job seekers and educational institutions identify the skills in demand, guiding curriculum and career decisions.
3.	Recruitment Efficiency	This parameter assesses how efficiently recruiters match candidates to job openings. It helps recruiters optimize their hiring processes and reduce time-to-fill metrics.
4.	Application and Resume Analytics	Analyzing the quality and effectiveness of job applications and resumes, this parameter helps job seekers improve their documents and increase their chances of being selected for interviews.

5.	Geographic Job Market Analysis	Analyzing job market trends and opportunities in different geographic regions, helping job seekers and institutions understand where to focus their efforts.
6.	Recruitment Source Performance	Evaluating the effectiveness of different recruitment sources (e.g., job boards, referrals, career fairs), this parameter guides recruiters in allocating resources to the most successful channels.

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	Data Collection and Integration	Ability to connect to various data sources such as databases, spreadsheets, and external APIs. Support for real-time data updates and batch processing.
FR-2	Data Analysis and Visualization	Generate summary statistics to describe placement trends. Create interactive dashboards for at-a-glance insights.
FR-3	User Management and Access Control	Implement secure login mechanisms for authorized users. Enable password resets and account management.
FR-4	Reporting and Exporting	Create a report builder for users to design custom reports. Export reports in various formats (PDF, Excel, CSV).
FR-5	Integration with Placement Systems	Develop APIs to connect with existing placement management systems. Support bi-directional data exchange for updates.

4.2 Non-Functional Requirements

FR No.	Non-Functional Requirement	Description
NFR-1	Scalability	The system should be able to handle an increasing volume of data and users as the number of placements and users grow over time.
NFR-2	Availability	The system should be available 24/7 to accommodate users in different time zones and ensure uninterrupted access to placement data.
NFR-3	Security	Data must be secured with appropriate encryption and access control mechanisms to protect sensitive placement information.
NFR-4	Compliance	The system must adhere to relevant legal and industry-specific regulations, such as GDPR or educational data privacy laws.
NFR-5	Usability	The user interface should be intuitive and user-friendly, requiring minimal training for users to operate the tool effectively.

CHAPTER-5 PROJECT DESIGN

5.1 DATA FLOW DIAGRAM

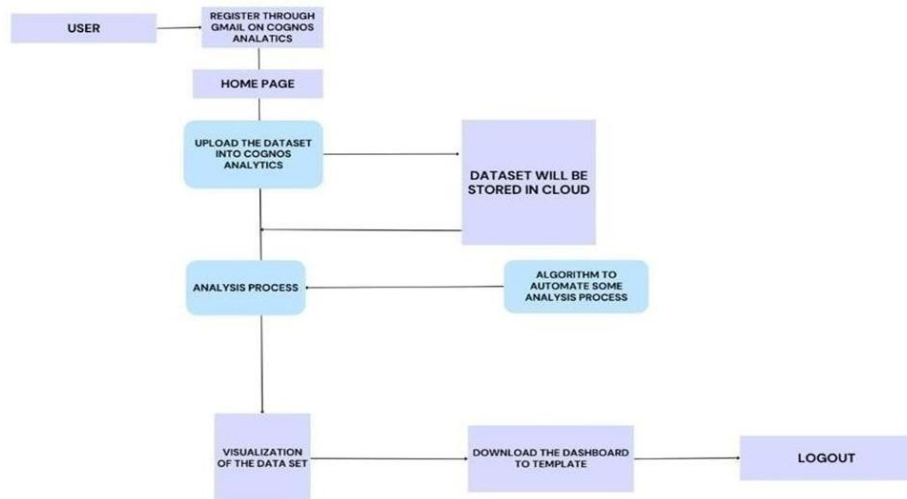


Fig-5.1 DATA FLOW DIAGRAM

5.2 SOLUTION & TECHNICAL ARCHITECTURE

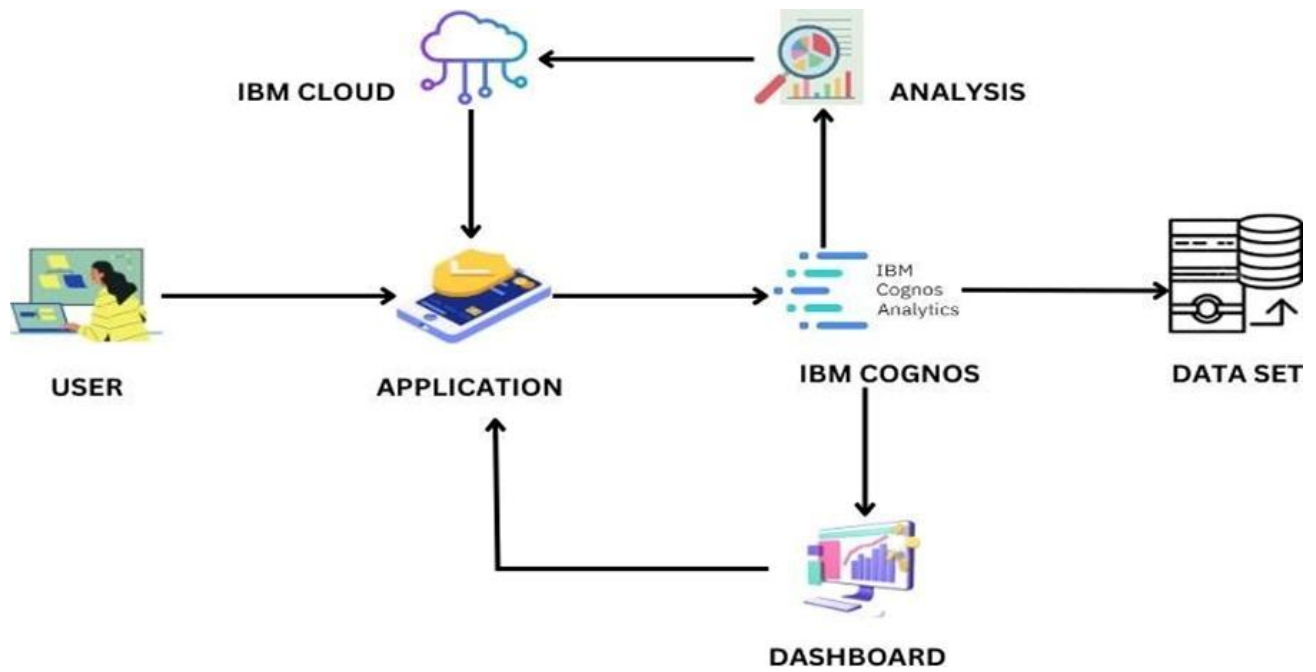


Fig-5.2 DATA FLOW DIAGRAM

Technical Architecture:

S. No	Component	Description	Technology
1.	Data Ingestion	This component is responsible for collecting data from various sources, such as job postings, resumes, application forms, and interview feedback.	Python, ETL (Extract, Transform, Load) processes, API integration.
2.	Data Storage	Store the collected data in a structured manner, making it easily accessible for analysis.	Relational databases (e.g., PostgreSQL, MySQL), NoSQL databases (e.g., MongoDB), Data Warehouses (e.g., Snowflake).
3.	Analytics Engine	The core component that performs data analysis, generates insights, and produces visualizations.	Jupyter notebooks, Python libraries (e.g., NumPy, SciPy, scikit-learn), business intelligence tools (e.g., Tableau, Power BI).
4.	Machine Learning Models	Develop and train ML models for predictive analytics, such as predicting job placement success based on historical data.	Python (scikit-learn, TensorFlow, PyTorch), cloud-based ML platforms (e.g., Google AI Platform, AWS SageMaker).

5.	Dashboard and Visualization	Create interactive dashboards and visualizations to present the analytical findings.	Web frameworks (e.g., Flask, Django), JavaScript libraries (e.g., D3.js, Plotly).
6.	User Authentication and Access Control	Ensure secure access to the tool by implementing user authentication and role-based access control.	OAuth2, JWT (JSON Web Tokens), IAM (Identity and Access Management) systems.

5.3 USER STORIES

User Type and Story number	Release	Functional Requirement (Epic)	User Story / Task	Acceptance criteria	Priority
Customer (web user) USN -1	Sprint 1	Student Profile Management	As a student, I want to create and manage my placement profile so that I can provide accurate information to potential employers.	The system should allow students to update and maintain their profiles easily.	High
USN-2	Sprint 1	Interview Scheduling	As a placement officer, I want to schedule and manage interviews between students and potential employers efficiently.	Placement officers can reschedule or cancel interviews and notify affected parties.	

USN-3	Sprint 2	Job Posting and Application	As a student, I want to create and manage my placement profile so that I can provide accurate information to potential employers.	It should provide analytics on the number of applications received for each job posting.	High
USN-4	Sprint 2	Data Security and Access Control	As a system administrator , I want to ensure the security and controlled access of placement data.	Access should be restricted to authorized users and regularly reviewed for accuracy.	
USN-5	Sprint 3	Reporting Dashboard	As a university administrator , I want a comprehensive reporting dashboard to gain insights into the overall performance of the placement program.	Users can export data from the dashboard for presentations and reporting.	

USN-6	Sprint 4	Feedback and Survey Management	As a placement officer, I want to collect feedback from students and employers to continuously improve the placement program.	Students and employers should receive notifications and links to complete surveys within the system.	High
USN-7	Sprint 4	Mobile Accessibility	As a student or employer, I want to access placement information and perform relevant tasks on my mobile device for convenience.	The mobile app should be available for download on major platforms (iOS and Android).	Medium
USN-8	Sprint 5	Integration with External Systems	As an IT administrator, I want the placement analytics tool to integrate with other systems, such as the university's student information system and email platform.	It should integrate with the university's calendar system to schedule and manage interviews.	Low

USN-9	Sprint 6	Login	As an admin, I can login to the application by entering username & password	Users should be automatically logged out after a certain period of inactivity for security reasons	High
USN-10	Sprint 6	Dashboard	As an admin, I can view the dashboard and other activities of the application	I can access the dashboard	High

CODING & SOLUTIONING

CHAPTER-6

CODING & SOLUTIONING

6.1 FEATURE 1: DASHBOARD

```
<!DOCTYPE html>
<html lang="en">

<head>
  <meta charset="utf-8">
  <meta content="width=device-width, initial-scale=1.0" name="viewport">

  <title>PLACEMENT ANALYSIS Bootstrap Template - Index</title>
  <meta content="" name="description">
  <meta content="" name="keywords">

  <!-- Favicons -->
  <link href="https://inurture.co.in/jagannath-university/jagannath-college-
admissions/imgs/icons/placement%20support.png" rel="icon">
  <link href="https://inurture.co.in/jagannath-university/jagannath-college-
admissions/imgs/icons/placement%20support.png" rel="apple-touch-icon">

  <!-- Google Fonts -->
  <link
href="https://fonts.googleapis.com/css?family=Open+Sans:300,300i,400,400i,600,600
i,700,700i|Raleway:300,300i,400,400i,500,500i,600,600i,700,700i|Poppins:300,300i,4
00,400i,500,500i,600,600i,700,700i" rel="stylesheet">

  <!-- Vendor CSS Files -->
  <link href="static/assets/vendor/aos/aos.css" rel="stylesheet">
  <link href="static/assets/vendor/bootstrap/css/bootstrap.min.css" rel="stylesheet">
  <link href="static/assets/vendor/bootstrap-icons/bootstrap-icons.css"
rel="stylesheet">
  <link href="static/assets/vendor/boxicons/css/boxicons.min.css" rel="stylesheet">
  <link href="static/assets/vendor/glightbox/css/glightbox.min.css" rel="stylesheet">
  <link href="static/assets/vendor/remixicon/remixicon.css" rel="stylesheet">
  <link href="static/assets/vendor/swiper/swiper-bundle.min.css" rel="stylesheet">

  <!-- Template Main CSS File -->
```

```

<link href="static/assets/css/style.css" rel="stylesheet">

<!-- =====
* Template Name: Gp
* Updated: May 30 2023 with Bootstrap v5.3.0
* Template URL: https://bootstrapmade.com/gp-free-multipurpose-html-bootstrap-template/
* Author: BootstrapMade.com
* License: https://bootstrapmade.com/license/
===== -->
</head>

<body>
<!-- ===== Dashboard Section ===== -->
  <section id="dashboard" class="dashboard">
    <div class="container" data-aos="fade-up">
      <iframe
src="https://sa1.ca.analytics.ibm.com/bi/?perspective=dashboard&pathRef=.my_folders%2FPlacement%2BAnalytics&closeWindowOnLastView=true&ui_appbar=false&ui_navbar=false&shareMode=embedded&action=view&amp;mode=dashboard&subView=model0000018b4bd32631_00000000"
width="320" height="200" frameborder="0" gesture="media" allow="encrypted-media" allowfullscreen=""></iframe>
    </div>
  </section><!-- End Dashboard Section -->
</body>
</html>

```

6.2 FEATURE 2

REPORT

```

<!DOCTYPE html>
<html lang="en">

<head>
  <meta charset="utf-8">
  <meta content="width=device-width, initial-scale=1.0" name="viewport">

  <title>PLACEMENT ANALYSIS Bootstrap Template - Index</title>
  <meta content="" name="description">
  <meta content="" name="keywords">

```

```

<!-- Favicons -->
<link href="https://inurture.co.in/jagannath-university/jagannath-college-
admissions/imgs/icons/placement%20support.png" rel="icon">
<link href="https://inurture.co.in/jagannath-university/jagannath-college-
admissions/imgs/icons/placement%20support.png" rel="apple-touch-icon">

<!-- Google Fonts -->
<link
href="https://fonts.googleapis.com/css?family=Open+Sans:300,300i,400,400i,600,600i
,700,700i|Raleway:300,300i,400,400i,500,500i,600,600i,700,700i|Poppins:300,300i,40
0,400i,500,500i,600,600i,700,700i" rel="stylesheet">

<!-- Vendor CSS Files -->
<link href="static/assets/vendor/aos/aos.css" rel="stylesheet">
<link href="static/assets/vendor/bootstrap/css/bootstrap.min.css" rel="stylesheet">
<link href="static/assets/vendor/bootstrap-icons/bootstrap-icons.css"
rel="stylesheet">
<link href="static/assets/vendor/boxicons/css/boxicons.min.css" rel="stylesheet">
<link href="static/assets/vendor/glightbox/css/glightbox.min.css" rel="stylesheet">
<link href="static/assets/vendor/remixicon/remixicon.css" rel="stylesheet">
<link href="static/assets/vendor/swiper/swiper-bundle.min.css" rel="stylesheet">

<!-- Template Main CSS File -->
<link href="static/assets/css/style.css" rel="stylesheet">

<!-- =====
* Template Name: Gp
* Updated: May 30 2023 with Bootstrap v5.3.0
* Template URL: https://bootstrapmade.com/gp-free-multipurpose-html-bootstrap-
template/
* Author: BootstrapMade.com
* License: https://bootstrapmade.com/license/
===== -->
</head>

<body>
<!-- ===== Your Report Section ===== -->
<section id="your-report" class="your-report">
  <div class="container" data-aos="fade-up">
    <!-- Insert your embedded code here -->
    <iframe
NM2023TMID01843

```

```

src="https://sa1.ca.analytics.ibm.com/bi/?pathRef=.my_folders%2FNew%2Breport&
mp;closeWindowOnLastView=true&amp;ui_appbar=false&amp;ui_navbar=false&am
p;shareMode=embedded&amp;action=edit" width="320" height="200"
frameborder="0" gesture="media" allow="encrypted-media"
allowfullscreen=""></iframe>
</div>
</section><!-- End Your Report Section -->
</body>
</html>

```

6.3 FEATURE 3

STORY

```

<!DOCTYPE html>
<html lang="en">

<head>
  <meta charset="utf-8">
  <meta content="width=device-width, initial-scale=1.0" name="viewport">

  <title>PLACEMENT ANALYSIS Bootstrap Template - Index</title>
  <meta content="" name="description">
  <meta content="" name="keywords">

  <!-- Favicons -->
  <link href="https://inurture.co.in/jagannath-university/jagannath-college-
admissions/imgs/icons/placement%20support.png" rel="icon">
  <link href="https://inurture.co.in/jagannath-university/jagannath-college-
admissions/imgs/icons/placement%20support.png" rel="apple-touch-icon">

  <!-- Google Fonts -->
  <link
href="https://fonts.googleapis.com/css?family=Open+Sans:300,300i,400,400i,600,600i
,700,700i|Raleway:300,300i,400,400i,500,500i,600,600i,700,700i|Poppins:300,300i,40
0,400i,500,500i,600,600i,700,700i" rel="stylesheet">

  <!-- Vendor CSS Files -->
  <link href="static/assets/vendor/aos/aos.css" rel="stylesheet">
  <link href="static/assets/vendor/bootstrap/css/bootstrap.min.css" rel="stylesheet">
  <link href="static/assets/vendor/bootstrap-icons/bootstrap-icons.css"
rel="stylesheet">

```

```

<link href="static/assets/vendor/boxicons/css/boxicons.min.css" rel="stylesheet">
<link href="static/assets/vendor/glightbox/css/glightbox.min.css" rel="stylesheet">
<link href="static/assets/vendor/remixicon/remixicon.css" rel="stylesheet">
<link href="static/assets/vendor/swiper/swiper-bundle.min.css" rel="stylesheet">

<!-- Template Main CSS File -->
<link href="static/assets/css/style.css" rel="stylesheet">

<!-- =====
* Template Name: Gp
* Updated: May 30 2023 with Bootstrap v5.3.0
* Template URL: https://bootstrapmade.com/gp-free-multipurpose-html-bootstrap-
template/
* Author: BootstrapMade.com
* License: https://bootstrapmade.com/license/
===== -->
</head>

<body>
<!-- ===== Storyboard Section ===== -->
<section id="storyboard" class="storyboard">
  <div class="container" data-aos="fade-up">
    <iframe
src="https://sa1.ca.analytics.ibm.com/bi/?perspective=story&pathRef=.my_folders
%2FNew%2Bstory&closeWindowOnLastView=true&ui_appbar=false&
;ui_navbar=false&shareMode=embedded&action=view&sceneId=mode
10000018b50e8cbfb_00000000&sceneTime=0" width="320" height="200"
frameborder="0" gesture="media" allow="encrypted-media"
allowfullscreen=""></iframe>
  </div>
</section><!-- End Storyboard Section -->
</body>
</html>

```

RESULT

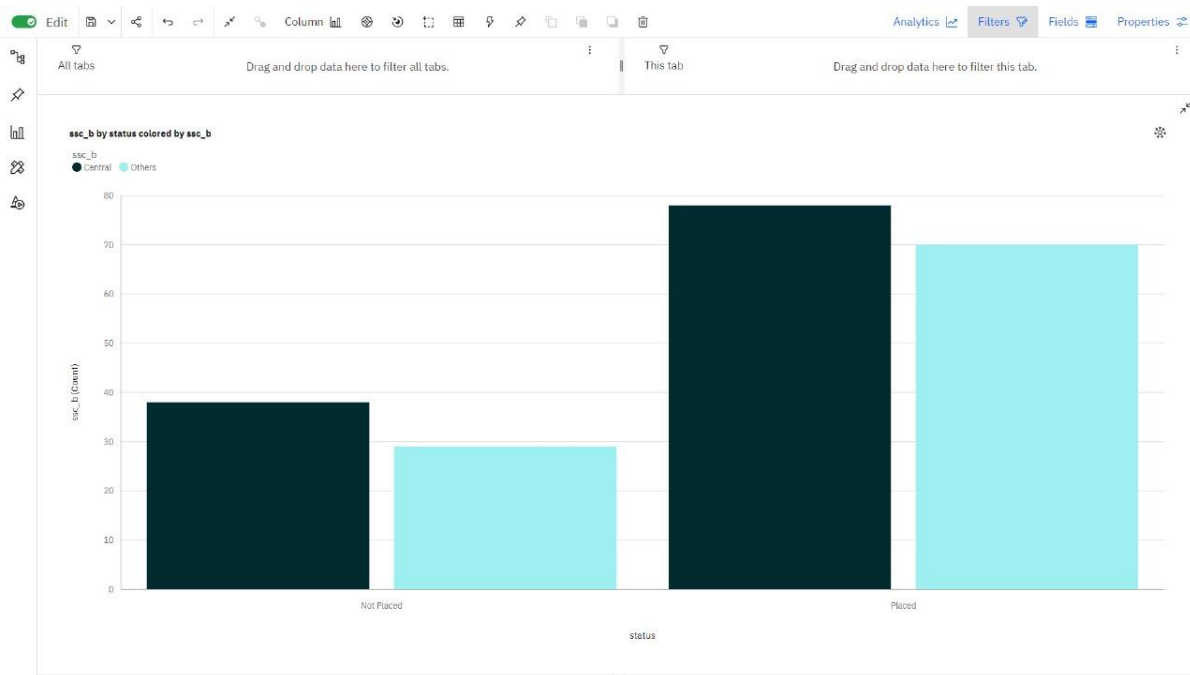
CHAPTER-7

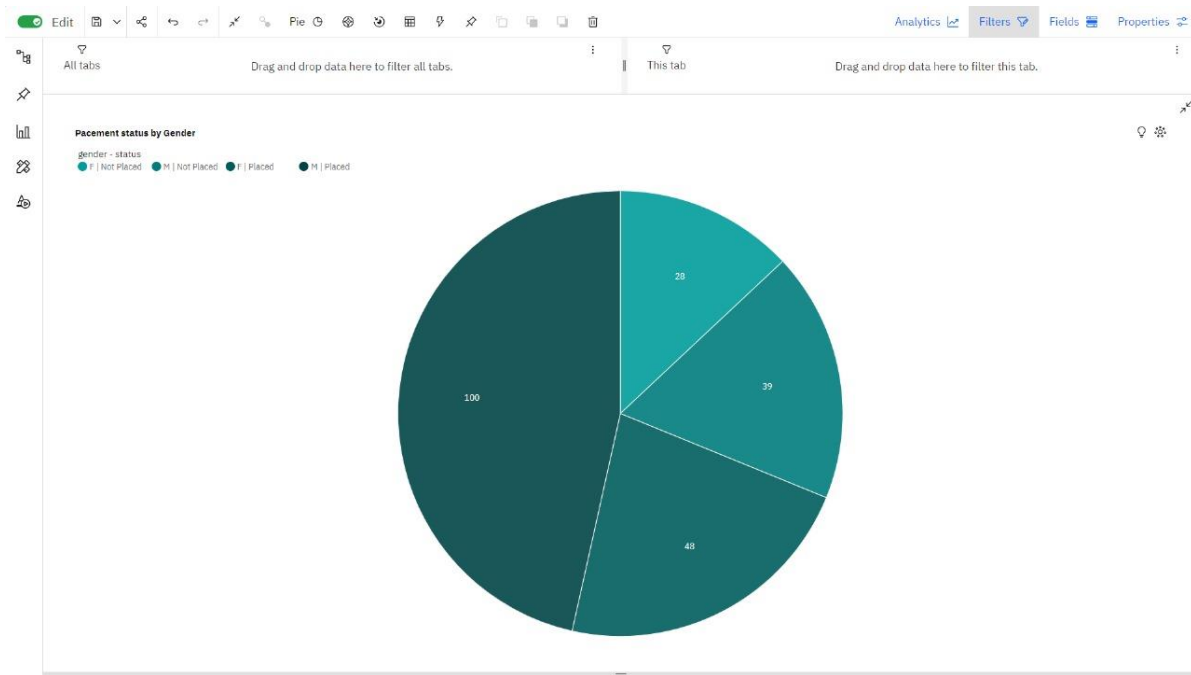
RESULT

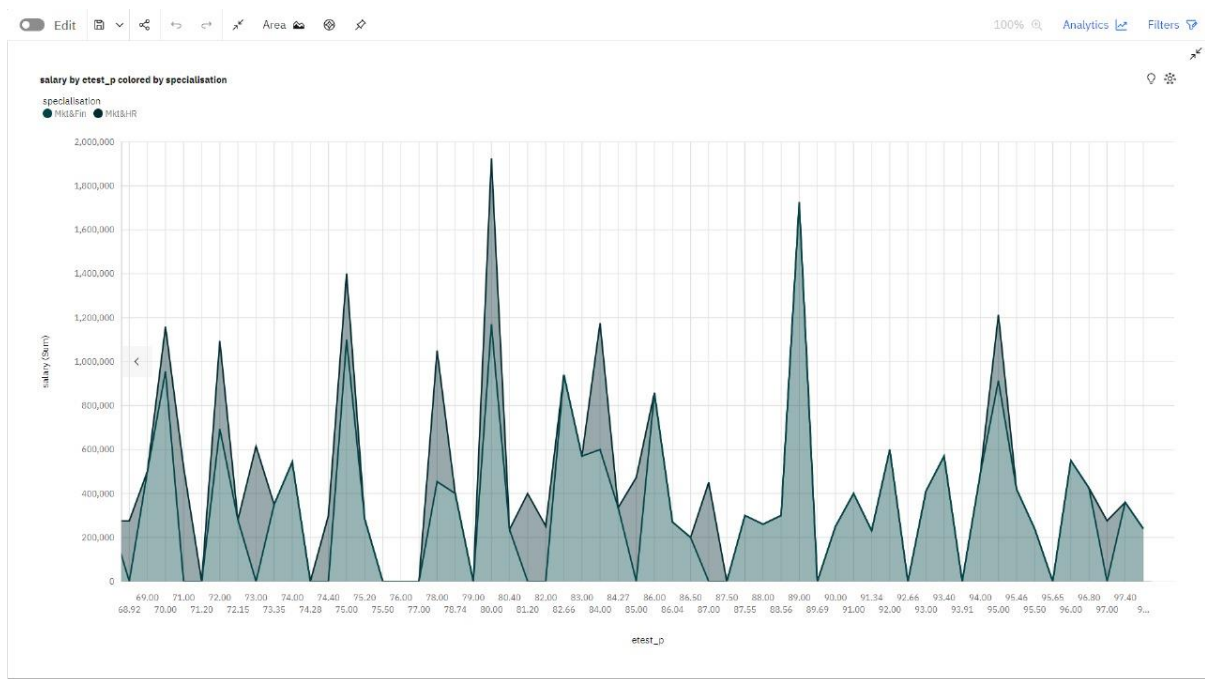
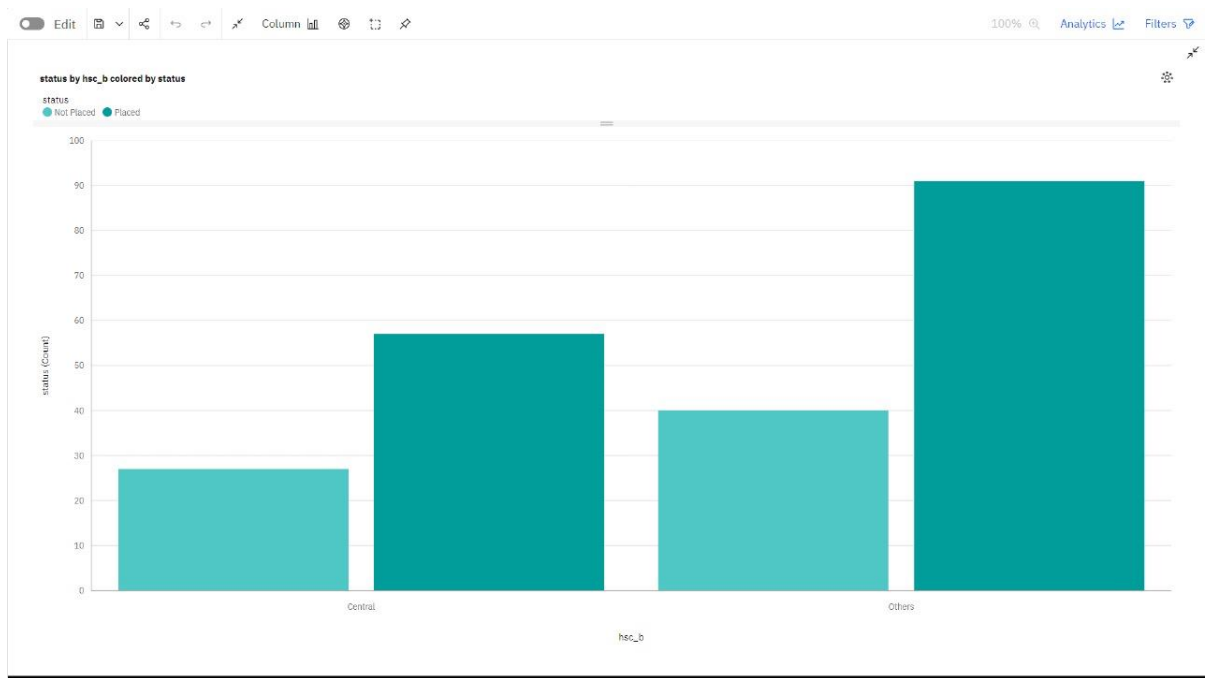
7.1 PERFORMANCE METRICS

7.1.1 Utilization of Data Filters

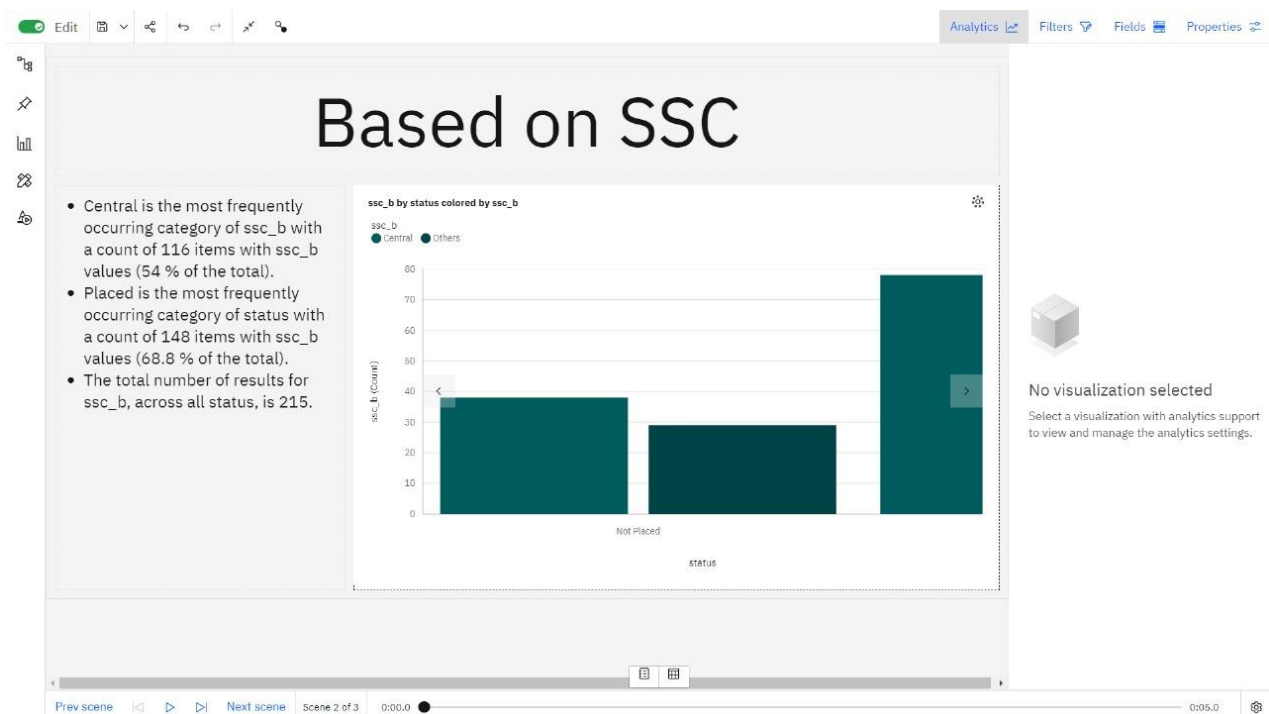
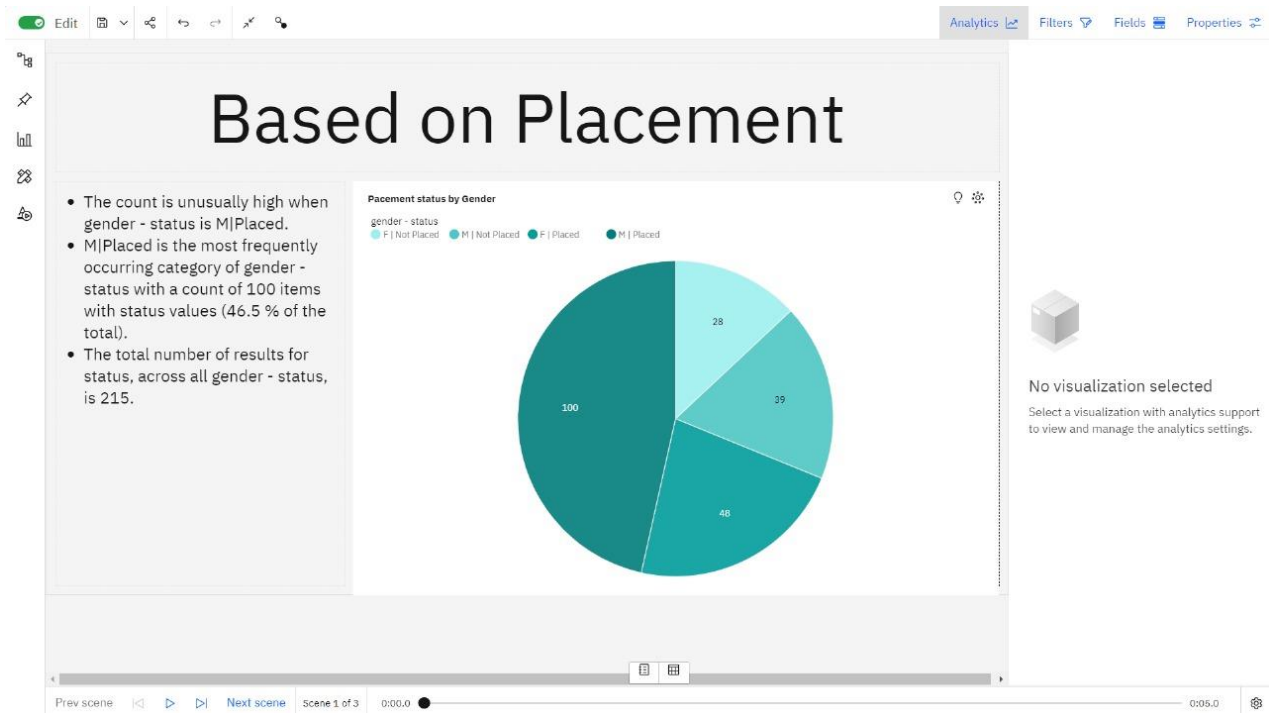
Dashboard

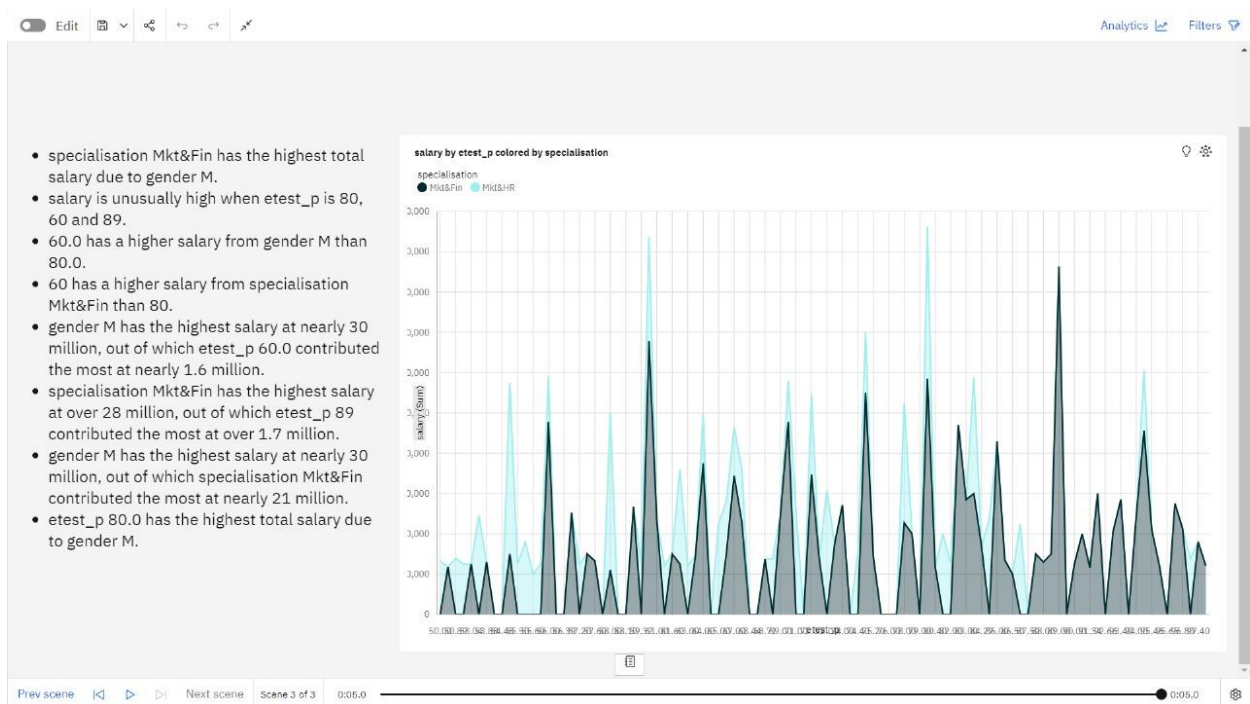




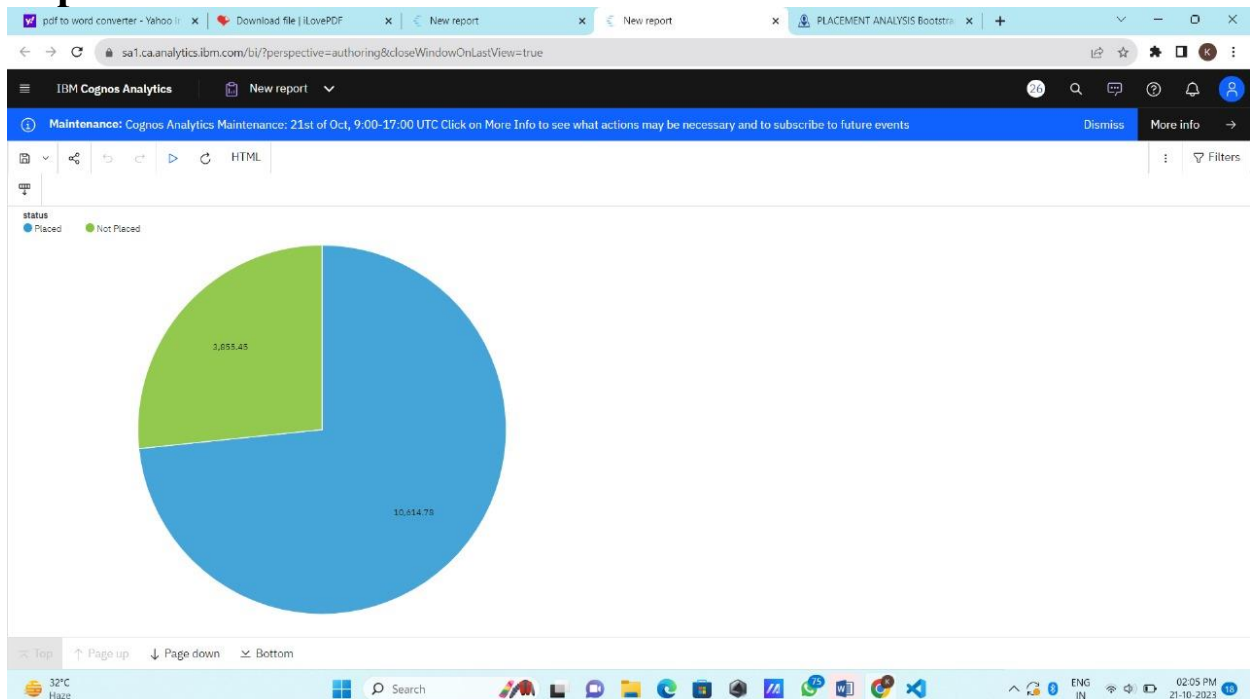


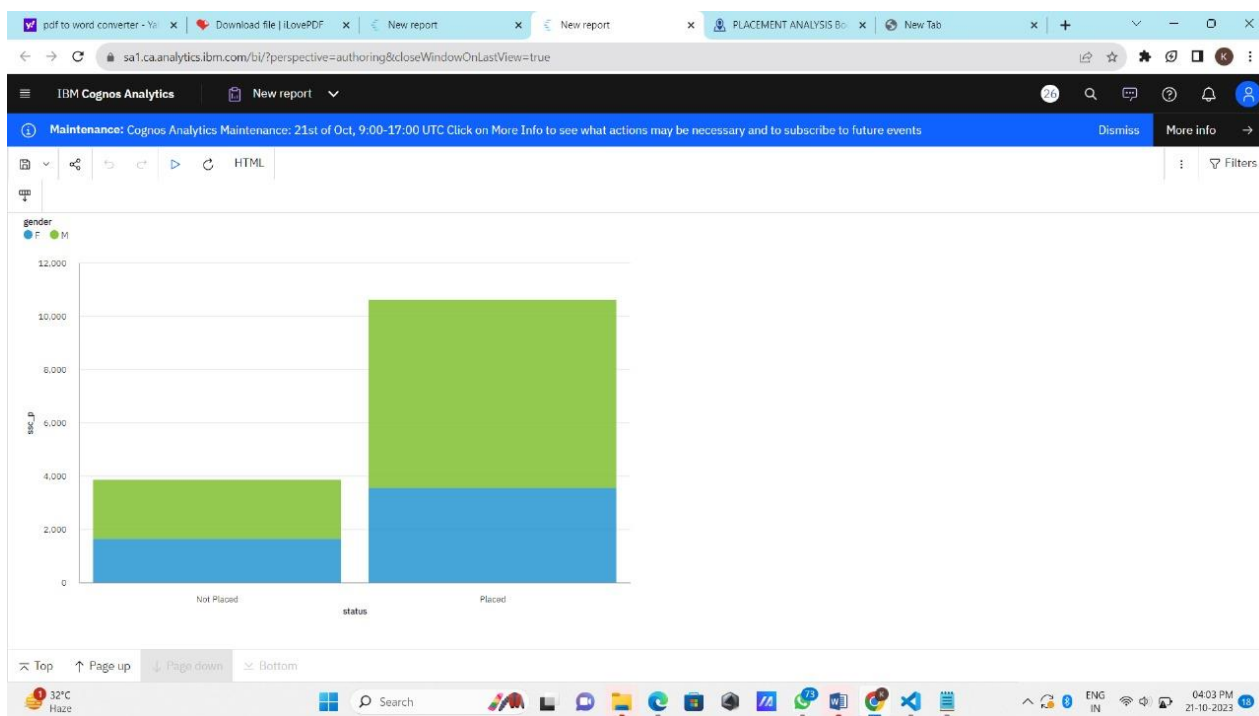
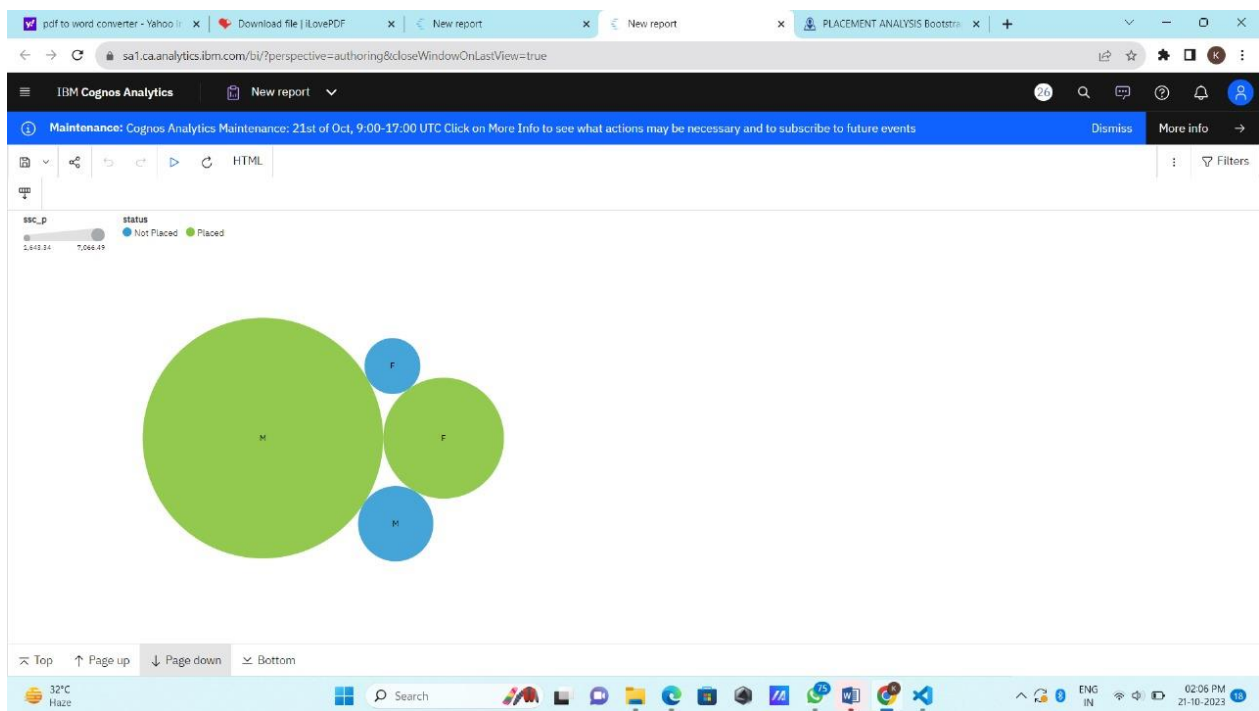
Story





Report





7.1.2 No of Calculation Fields

The screenshot shows the IBM Cognos Analytics interface. On the left, the 'Data module' sidebar is visible, containing a search bar and a list of fields. The main area displays a table with the following data:

Row Id	sl_no	gender	ssc_p	ssc_b	hsc_p	hsc_b
1	1	M	67	Others	91	Others
2	2	M	79.33	Central	78.33	Others
3	3	M	65	Central	68	Central
4	4	M	56	Central	52	Central
5	5	M	85.8	Central	73.6	Central
6	6	M	55	Others	49.8	Others
7	7	F	46	Others	49.2	Others
8	8	M	82	Central	64	Central
9	9	M	73	Central	79	Central
10	10	M	58	Central	70	Central
11	11	M	58	Central	61	Central
12	12	M	69.6	Central	68.4	Central
13	13	F	47	Central	55	Others

ADVANTAGES

CHAPTER-8

ADVANTAGES AND DISADVANTAGES

ADVANTAGES

Data-Driven Decision Making and Improved Candidate Matching:

Analytics tools enable data-driven decision-making in the placement process. By analyzing data, you can make informed choices about the best candidates for specific roles. Analytics can help match candidates with job requirements more effectively, increasing the likelihood of successful placements.

Cost Efficiency and Faster Placements:

By optimizing the placement process, you can reduce costs associated with recruiting and training, as well as potential turnover. Analytics tools can streamline the placement process, reducing the time it takes to fill open positions.

Quality Control and Predictive Analytics:

These tools can help maintain placement quality by tracking candidate performance and feedback, leading to better outcomes for both employers and employees. Some tools can provide insights into future trends and market demands, helping organizations prepare for future hiring needs.

DISADVANTAGES

Overreliance on Data and Data Accuracy:

Relying solely on analytics tools can lead to overlooking qualitative aspects of candidates, such as soft skills or cultural fit, which are essential for a successful placement. Analytics tools depend on the accuracy of the data input. Inaccurate or incomplete data can lead to flawed insights and poor placement decisions.

Bias in Data and Lack of Human Touch:

Analytics tools can perpetuate biases present in historical data, leading to unfair or discriminatory outcomes in placements. Placements involve interpersonal dynamics, and analytics tools may lack the human touch required for effective communication and relationship building.

CHAPTER-9

CONCLUSION

In conclusion, educational institutions and employment placement firms can greatly benefit from the deployment of an analytics tool for placements. With regard to student performance, employer engagement, and overall placement success, this tool can offer useful insights. Through the use of data-driven decision-making, educational institutions may increase the employability of their students and better match their programmes with industry demands, which will ultimately result in better placement outcomes and stronger employer relationships. It's an effective instrument for supporting professional growth and guaranteeing graduates' success in the dynamic labour market.

FUTURE SCOPE



CHAPTER-10

FUTURE SCOPE

The future scope for a placements analytics tool includes predictive analytics, skills gap analysis, personalized career guidance, alumni success tracking, real-time job matching, diversity and inclusion analytics, integration with HR tech, remote work analytics, industry-specific customization, and a focus on ethical data use to adapt to changing job market dynamics. These developments will enhance the efficiency and effectiveness of job placements for students and employers.

APPENDIX

CHAPTER-11

APPENDIX

11.1 SOURCE CODE

Flash code

App.py

```
from flask import Flask, render_template

app = Flask(__name__)

@app.route("/") #decoratar
def index():
    return render_template("index.html")

if __name__ == "__main__":
    app.run(debug=False,port = 7000 )
```

ibm.html

```
<!DOCTYPE html>
<html lang="en">

<head>
  <meta charset="utf-8">
  <meta content="width=device-width, initial-scale=1.0" name="viewport">

  <title>PLACEMENT ANALYSIS Bootstrap Template - Index</title>
  <meta content="" name="description">
  <meta content="" name="keywords">

  <!-- Favicons -->
  <link href="https://inurture.co.in/jagannath-university/jagannath-college-
admissions/imgs/icons/placement%20support.png" rel="icon">
  <link href="https://inurture.co.in/jagannath-university/jagannath-college-
admissions/imgs/icons/placement%20support.png" rel="apple-touch-icon">

  <!-- Google Fonts -->
  <link
href="https://fonts.googleapis.com/css?family=Open+Sans:300,300i,400,400i,600,600i
,700,700i|Raleway:300,300i,400,400i,500,500i,600,600i,700,700i|Poppins:300,300i,40
0,400i,500,500i,600,600i,700,700i" rel="stylesheet">
```

```

<!-- Vendor CSS Files -->
<link href="static/assets/vendor/aos/aos.css" rel="stylesheet">
<link href="static/assets/vendor/bootstrap/css/bootstrap.min.css" rel="stylesheet">
<link href="static/assets/vendor/bootstrap-icons/bootstrap-icons.css"
rel="stylesheet">
<link href="static/assets/vendor/boxicons/css/boxicons.min.css" rel="stylesheet">
<link href="static/assets/vendor/glightbox/css/glightbox.min.css" rel="stylesheet">
<link href="static/assets/vendor/remixicon/remixicon.css" rel="stylesheet">
<link href="static/assets/vendor/swiper/swiper-bundle.min.css" rel="stylesheet">

<!-- Template Main CSS File -->
<link href="static/assets/css/style.css" rel="stylesheet">

<!-- =====
* Template Name: Gp
* Updated: May 30 2023 with Bootstrap v5.3.0
* Template URL: https://bootstrapmade.com/gp-free-multipurpose-html-bootstrap-
template/
* Author: BootstrapMade.com
* License: https://bootstrapmade.com/license/
===== -->
</head>

<body>
dashboard.html

<section id="dashboard" class="dashboard">
  <div class="container" data-aos="fade-up">
    <iframe
src="https://sa1.ca.analytics.ibm.com/bi/?perspective=dashboard&pathRef=.my_f
olders%2FPlacement%2BAnalytics&closeWindowOnLastView=true&ui_ap
pbar=false&ui_navbar=false&shareMode=embedded&action=view&am
p;mode=dashboard&subView=model0000018b4bd32631_00000000"
width="320" height="200" frameborder="0" gesture="media" allow="encrypted-
media" allowfullscreen=""></iframe>
    </div>
  </section><!-- End Dashboard Section -->

```

Report.html

```
<section id="your-report" class="your-report">
  <div class="container" data-aos="fade-up">
    <!-- Insert your embedded code here -->
    <iframe
src="https://sa1.ca.analytics.ibm.com/bi/?pathRef=.my_folders%2FNew%2Breport&a
mp;closeWindowOnLastView=true&amp;ui_appbar=false&amp;ui_navbar=false&am
p;shareMode=embedded&amp;action=edit" width="320" height="200"
frameborder="0" gesture="media" allow="encrypted-media"
allowfullscreen=""></iframe>
  </div>
</section><!-- End Your Report Section -->
```

Story.html

```
<!-- ===== Storyboard Section ===== -->
<section id="storyboard" class="storyboard">
  <div class="container" data-aos="fade-up">
    <iframe
src="https://sa1.ca.analytics.ibm.com/bi/?perspective=story&amp;pathRef=.my_folders
%2FNew%2Bstory&amp;closeWindowOnLastView=true&amp;ui_appbar=false&amp
;ui_navbar=false&amp;shareMode=embedded&amp;action=view&amp;sceneId=mode
10000018b50e8cbfb_00000000&amp;sceneTime=0" width="320" height="200"
frameborder="0" gesture="media" allow="encrypted-media"
allowfullscreen=""></iframe>
  </div>
</section><!-- End Storyboard Section -->
</body>
</html>
```


11.2 GITHUB & PROJECT VIDEO DEMO LINK

GITHUB LINK:

<https://github.com/Kokilavanivasanthan/naanmudhalvan-DataAnalytics-NM2023TMID01843>

PROJECT DEMO LINK:

<https://drive.google.com/file/d/1mFbqWH-mIAB5aX1jBIYQZwtuG1Uml-hK/view?usp=drivesdk>

CHAPTER 12

REFERENCES

1. 2019 Predictive Analytics for Placement of Student- A Comparative Study
2. A Comparative Study On Students Placement Performance Using Data Mining Algorithms
3. 2021 Student Placement Prediction Using Machine Learning
4. Review on Predictive Analysis of Placement of Students Using Machine Learning Algorithms
5. 2020 Prediction of Student Placement Using Machine Learning Algorithm