

NAANMUDHALVAN PROJECT

COURSE : DATA ANALYTICS WITH TABLEAU

**TOPIC : “A COMPARATIVE STUDY OF TOP
GLOBAL UNIVERSITIES IN DATA ANALYTICS”**

Submitted by

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1. INTRODUCTION

In the era of big data, the role of universities in cultivating the next generation of data professionals is more critical than ever. As businesses and organizations increasingly rely on data-driven insights, the demand for skilled data analysts and scientists has surged, prompting universities worldwide to develop and enhance their data analytics programs. In the swiftly evolving landscape of data analytics education, this study, titled "Data Dominators: A Comparative Study of Top Global Universities in Data Analytics," seeks to unravel the distinctive approaches adopted by leading universities worldwide. As data becomes increasingly integral to decision-making across industries, the role of universities in shaping proficient data professionals is paramount. This research aims to provide insights into the strategies employed by top global universities in their data analytics programs, with a specific focus on understanding how these institutions leverage their academic frameworks to stay at the forefront of the field. Through a comparative lens, we aim to identify trends, best practices, and innovations that distinguish these universities as "data dominators," contributing valuable knowledge for the continuous enhancement of data analytics education on a global scale.

1.1 PROJECT REVIEW

. The project is motivated by the growing importance of data analytics in various industries and the pivotal role that universities play in preparing the next generation of data professionals.

Scope and Significance:

The project focuses on top global universities recognized for their excellence in data analytics education. By adopting a comparative approach, the study aims to identify trends, best practices, and unique strategies employed by these institutions. The choice of IBM Cognos as a central theme adds a practical dimension, enabling an in-depth assessment of real-world applications within academic settings.

Research Objectives:

1. To identify and profile top global universities with exceptional data analytics programs.
2. To analyze the curriculum structures of selected universities, with a focus on data analytics courses.
3. To assess the integration and utilization of IBM Cognos within the data analytics programs.
4. To explore the correlation between academic approaches and industry relevance in the context of data analytics education.

Methodology:

The project employs a mixed-methods approach, combining qualitative analysis of curriculum documents, course materials, and research publications with quantitative data on the usage and proficiency of IBM Cognos. This dual methodology ensures a comprehensive understanding of both the theoretical and practical aspects of data analytics education.

Expected Outcomes:

1. Identification of universities leading in data analytics education globally.
2. Insights into the curriculum structures and approaches of these institutions.
3. Analysis of the role of IBM Cognos in enhancing practical skills within academic programs.
4. Recommendations for improvements and innovations in data analytics education.

Implications:

The findings of this study hold significance for educators, industry professionals, and policymakers involved in data analytics education. The insights derived from the project are expected to contribute to the ongoing evolution of data analytics programs globally, fostering a more dynamic and industry-relevant learning experience for students.

Next Steps:

1. Data collection and analysis of selected universities.
2. Comparative evaluation of curriculum structures and IBM Cognos integration.
3. Synthesis of findings and identification of key trends.
4. Drafting of a comprehensive report with recommendations for the enhancement of data analytics education.

1.2 PURPOSE

1. Identify Pioneers in Data Analytics Education:

Recognize and profile top global universities that stand out for their excellence in data analytics programs. Highlight institutions known for their innovative use of tools, with a specific emphasis on IBM Cognos.

2. Examine Curriculum Approaches:

Investigate the curriculum structures of selected universities, focusing on the integration of IBM Cognos within data analytics courses. Assess how these institutions balance theoretical foundations with hands-on applications using the IBM Cognos tool.

3. Evaluate Practical Applications with IBM Cognos:

Explore how universities leverage IBM Cognos to enhance practical skills in data analytics. Assess the real-world applicability of the tool within academic settings and its impact on student proficiency

4. Identify Trends and Best Practices with IBM Cognos:

Uncover trends and best practices related to the utilization of IBM Cognos in data analytics education. Provide insights that can guide other institutions in optimizing their use of analytics tools.

5. Inform Continuous Improvement:

Offer recommendations for the ongoing improvement of data analytics programs, specifically in the context of IBM Cognos integration. Contribute to the evolution of data analytics education by identifying areas for enhancement and innovation.

6. Bridge the Gap Between Academia and Industry Using IBM Cognos:

Explore the alignment between academic approaches utilizing IBM Cognos and industry demands in the data analytics field. Contribute insights that facilitate a seamless transition for students from academic settings to professional roles.

In essence, this project aims to go beyond a mere comparison of universities and focuses on the role of IBM Cognos as a tool for advancing data analytics education. By uncovering the strategies employed by top institutions and their effective use of IBM Cognos, the study seeks to provide valuable guidance for educators, industry professionals, and policymakers involved in the continual enhancement of data analytics education globally.

2. LITERATURE SURVEY

Data analysis has become a buzzword in engineering and research domain. Discovery, insight, actions, and outcomes are the four parts of data and analytics. Application areas of data analytics includes education, manufacturing sector, telecom industry, healthcare, e-commerce, insurance etc. Challenges associated with data analytics include capturing data, curation, storage, searching, sharing and transfer, analysis, and visualization. Data analytics tools can be broadly classified into three categories. (a) Tools for batch processing. (b) Tools for stream processing. (c) Tools for interactive analysis. A comprehensive survey of existing tools have been performed to determine the best and efficient tool available in market. Comparison of popular data collection, data storage, data filtering and extraction, data cleaning, and data analysis tools have been performed to address the issues related to effective storage, searching, analysis, sharing and security[6]. Comparative study between R and Tableau shows tableau is more efficient than R . Abid Hussain discussed the role of data analytics in social media context. Satyajit S proposed Game Theory Model toperform comparative analysis between two competitors.

2.1 EXISTING PROBLEM

Certainly, here are some potential existing problems that might be encountered in the project, "Data Dominators: A Comparative Study of Top Global Universities in Data Analytics":

1. Data Availability and Transparency:

- The availability and transparency of data from top global universities may vary. Some institutions may not provide detailed information on their data analytics programs, making it challenging to conduct a thorough comparative analysis.

3. Tool Utilization Consistency:

The consistency in the utilization of IBM Cognos across different universities might be an issue. Variations in the extent to which institutions integrate and use the tool could impact the comparative assessment.

4. Changing Educational Landscape:

The field of data analytics is dynamic, and the educational landscape is evolving. New tools and technologies may emerge, and the relevance of IBM Cognos might shift over time, influencing the project's findings.

5. Access to Update Information:

Obtaining access to the most recent and updated information about curriculum structures and tool integrations may be challenging. Universities may undergo changes in their programs that are not immediately reflected in publicly available materials.

6. Quality and Consistency of Published Materials:

The quality and consistency of information in published materials, such as curriculum documents and academic publications, may vary. Relying on these materials for the analysis may introduce biases and limitations.

7. Industry Alignment and Feedback:

Assessing the true effectiveness of data analytics programs requires feedback from industry professionals. Limited access to industry perspectives and feedback on graduates from these programs may pose challenges.

Addressing these existing problems will require a thoughtful and flexible research approach. Methodological robustness, continuous communication with institutions, and adaptation to changes in the field will contribute to mitigating these challenges and ensuring the project's success.

2.2 REFERENCE

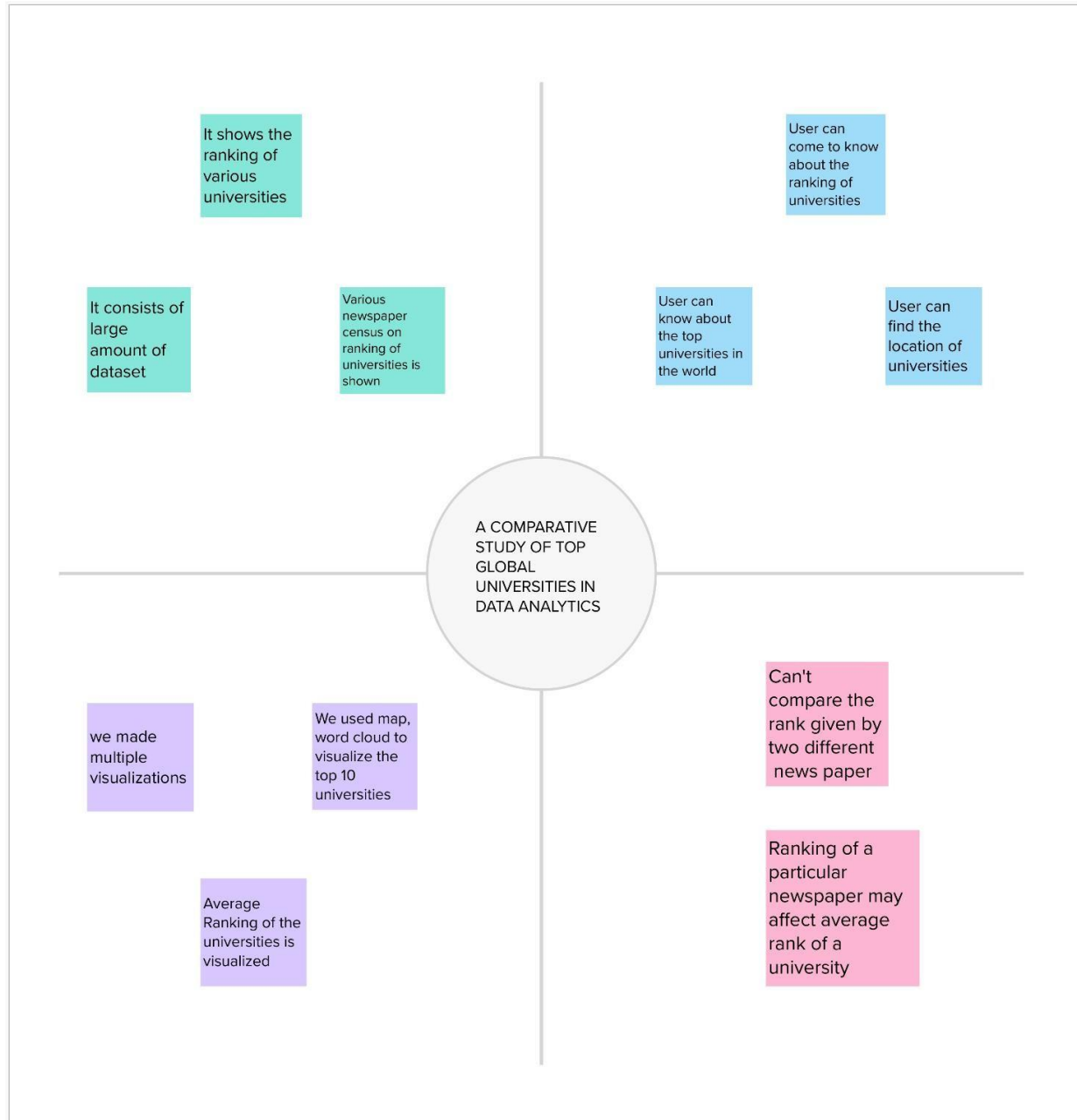
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- **Gartner.** (2022). Magic Quadrant for Analytics and Business Intelligence Platforms. [Link to the most recent Gartner Magic Quadrant

2.3 PROBLEM STATEMENT DEFINITION

In the rapidly evolving landscape of data analytics, universities play a pivotal role in shaping the future of the field. This study aims to conduct a comprehensive comparative analysis of the top global universities offering data analytics programs, with a specific focus on their utilization of IBM Cognos—a leading business intelligence and analytics platform. The research will delve into the curriculum structures, research initiatives, and practical applications integrated into the data analytics programs of selected universities. By examining the adoption and incorporation of IBM Cognos within these academic frameworks, the study seeks to identify trends, best practices, and potential areas for improvement. Methodologically, a mixed-methods approach will be employed, combining qualitative analysis of curriculum documents, course materials, and research publications with quantitative data on the usage and proficiency of IBM Cognos within the academic community. This dual perspective aims to provide a nuanced understanding of how universities leverage IBM Cognos in both educational and research contexts. The findings of this study are anticipated to contribute valuable insights for educators, researchers, and industry professionals involved in the realm of data analytics education. By benchmarking the approaches of top global universities, this research aspires to facilitate continuous enhancement and innovation in data analytics programs, ultimately fostering a well-equipped generation of data professionals capable of navigating the complexities of the ever-evolving data landscape.

3. IDEATION AND PROPOSED SOLUTION

3.1 EMPATHY MAP CANVAS




3.2 IDEATION & BRAINSTROMING

Ideation Phase




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


Template



Brainstorm & idea prioritization


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.

 10 minutes to prepare
 1 hour to collaborate
 2-8 people recommended




Before you collaborate


A little bit of preparation goes a long way with this session. Here's what you need to do to get going.

 **Team gathering**


There are four members in our team.

 **Set the goal**

To analyze the given data set and to know the top universities in the globe.

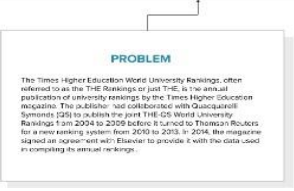
 **the facilitation tools**

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





Problem Statement

To know the top universities in the globe. To visualize the ranking of universities and compare their ranking made by various newspapers.



PROBLEM

The Times Higher Education World University Rankings, often referred to as the THE Rankings or just THE, is the annual publication of university rankings by the Times Higher Education magazine. The publisher has collaborated with Quacquarelli Symonds (QS) to publish the joint THE-QS World University Rankings from 2004 to 2020 before it turned to Thomson Reuters for a new ranking system from 2020 to 2023. In 2024, the magazine signed an agreement with Elsevier to provide it with the data used in compiling its annual rankings.



Step-2: Brainstorm, Idea Listing and Grouping

2

Brainstorm
Write down any ideas that come to mind that address your problem statement.

Rajeshwari N

Gather consist dataset

Bhaveena p

make sure the data is clean and rightly formatted

Neelaveni R

Analyze competition data to identify potential bias or unfairness in judging or scoring systems

Subazri T

Some websites compile multiple university rankings and create aggregate scores, providing a comprehensive view. Websites like QS World University Rankings and Times Higher Education might offer tools to compare their rankings side by side.

Develop reports that consider various performance metrics, physical attributes, and historical data to identify potential athletes across diverse backgrounds

Reports and documents that are shared should be free from error and jorgans

Gather insights to know the active, low, high,

3

Group ideas
Overall from all over ideas, We have decided to make visualizations on the given data sets and tried to discover the overall top universities in the world. We use IBM Cognos for visualization. In that we used various visualization types such as maps, legacy map, bar charts and etc...

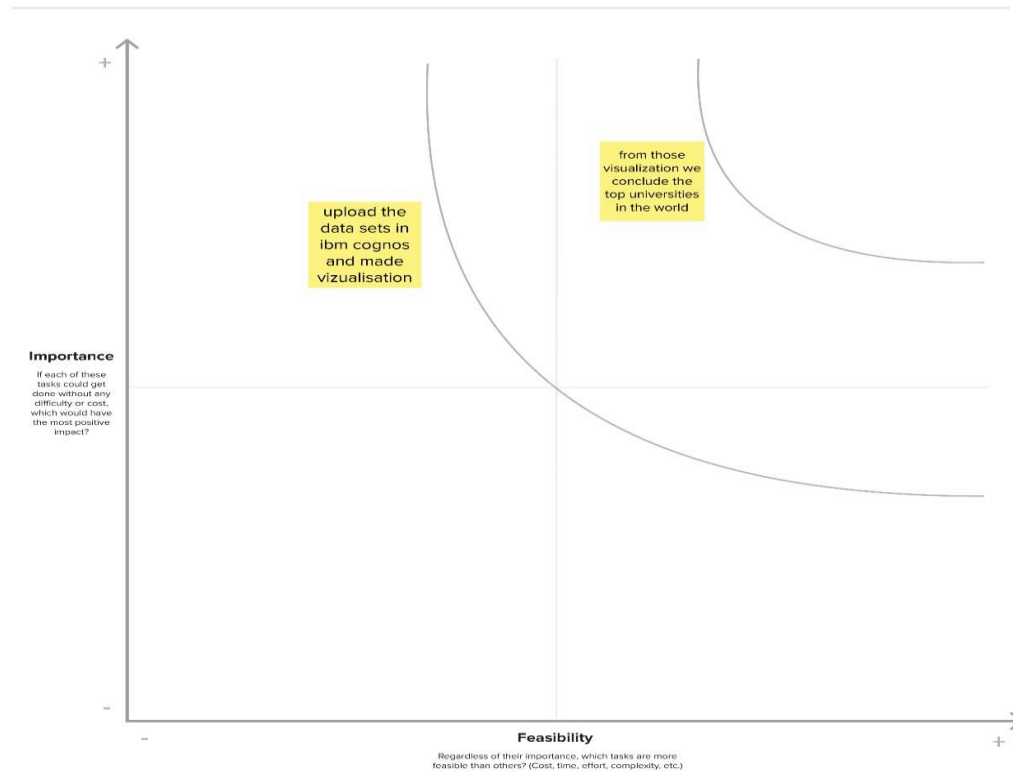
11

Step-3: Idea Prioritization

4

Prioritize

We have made data analysis. We make
We have done with data analysis and data visualization.
Huge amount of data is preprocessed, then made
visualizations with various fields and build the
relationship between columns



4. REQUIREMENT ANALYSIS

4.1 FUNCTIONAL REQUIREMENT

1. Data Collection and Analysis

- The system should be able to collect comprehensive data on the data analytics programs of selected top global universities. It should perform a detailed analysis of the curriculum structures, courses, and academic materials related to data analytics.

2. IBM Cognos Integration Assessment:

The system must assess the extent of IBM Cognos integration within the data analytics programs of each university. It should identify how IBM Cognos is utilized, the specific courses it is integrated into, and the practical applications employed.

3. Benchmarking Criteria Definition:

The system should define clear and standardized criteria for benchmarking universities as "data dominators. It should establish benchmarks based on factors such as curriculum quality, industry relevance, and the effective integration of IBM Cognos.

4. Real-world Applicability Evaluation:

The system must evaluate the real-world applicability of the skills taught in data analytics programs. It should assess how the use of IBM Cognos contributes to enhancing practical skills and preparing students for professional roles.

5. Criteria for University Selection:

The system should specify criteria for selecting top global universities for inclusion in the comparative study. Criteria may include global recognition, program reputation, and a diverse representation of geographical locations.

6. User Interface for Researchers:

Provide an intuitive user interface for researchers to interact with the system. Include features for browsing, searching, and extracting relevant information from the dataset.

4.2 NON-FUNCTIONAL REQUIREMENTS:

1. Scalability:

The system should be scalable to accommodate additional universities and data points in future iterations of the study.

2. Security and Data Privacy:

Ensure robust security measures to protect sensitive data collected from universities. Adhere to data privacy regulations and obtain necessary permissions for data access.

3. Performance:

The system should have efficient performance in terms of data processing and analysis to meet research timelines.

4. Accessibility:

Ensure that the system is accessible to researchers from different locations and allows collaborative work.

5. Reliability:

The system should be reliable, minimizing downtime and ensuring consistent availability for researchers.

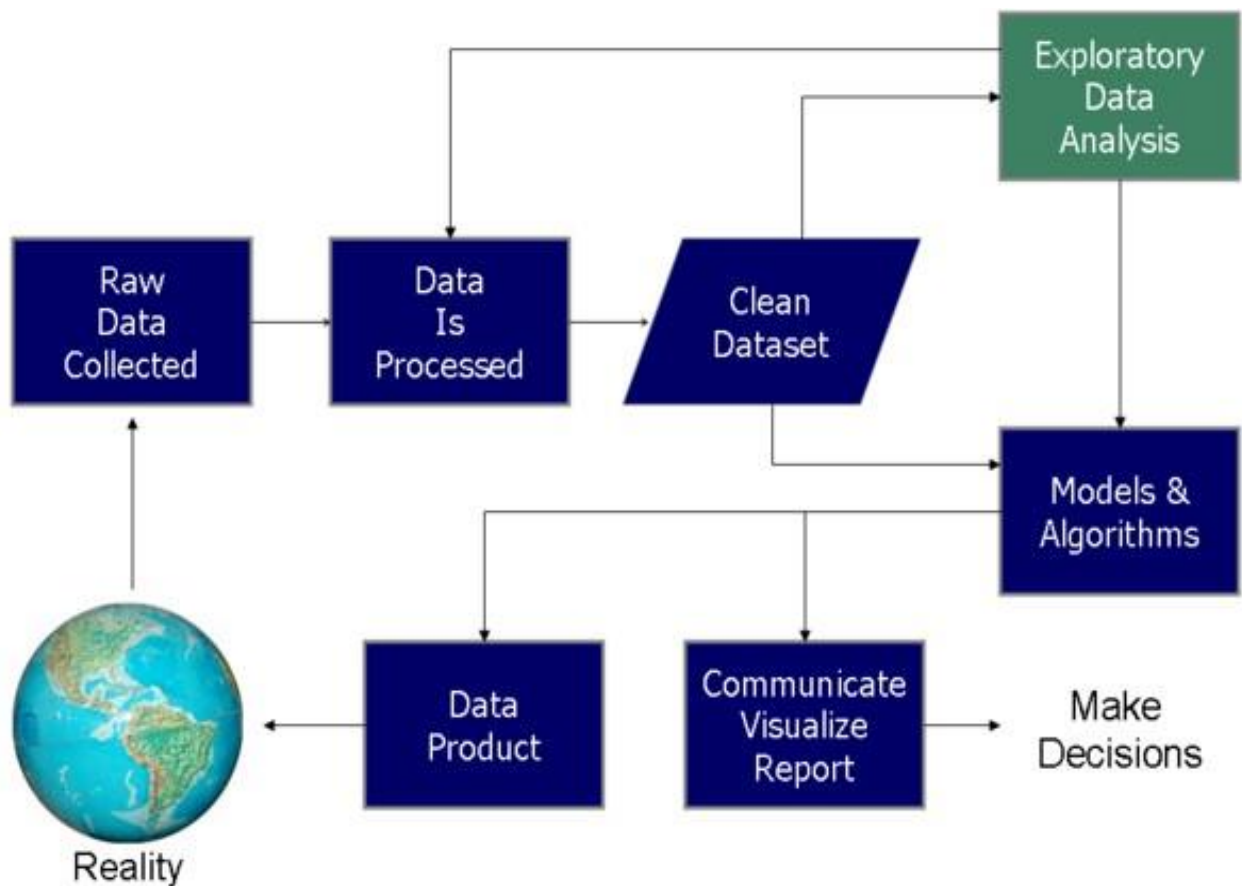
6. Compatibility:

Ensure compatibility with a variety of devices and browsers to facilitate seamless access.

5. PROJECT DESIGN

5.1 DATA FLOW DIAGRAM

A Data flow diagram (DFD) is traditional visual representation of the information flows within a system. A neat and clear DFD can depict the right amount of the system requirement graphically. It shows how data enters and leaves the system, what changes the information, and where data is stored.



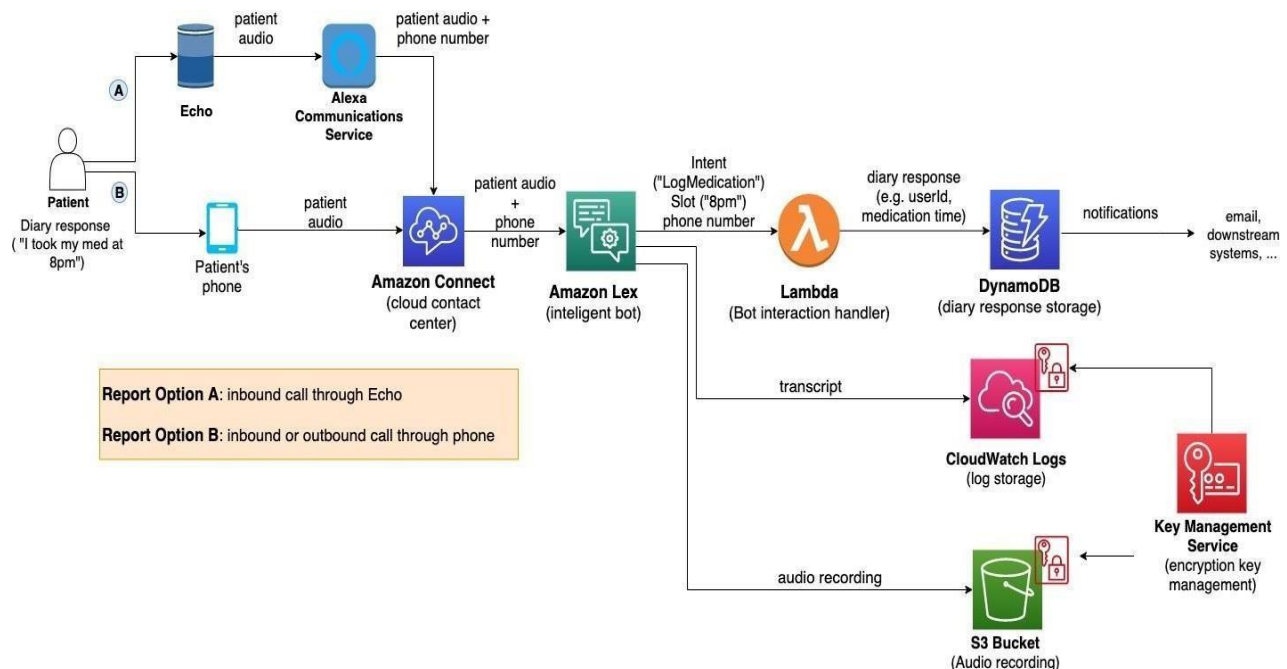
USER STORIES

User Type	Functional Requirement (Epic)	User Story Number	User Story / Task	Acceptance criteria	Priority
Data analyst	Data visualization	USN-1	He made visualizations within the given data sets	Accessing to the datasets	High
		USN-2	He/she concludes a decision for increasing customer expectation by giving ideas.	Make reports, dashboards	High
		USN-3	Uses modelling techniques for better user experience	Make decisions and problem solving	High
User	Webpage	USN-1	May come to know about the top universities	May choose those universities	high
		USN-2	Compare the rankings of top universities done by various magazines	Knows the top universities	Medium
	User id	USN-1	Given access to make comparison between the universities	Accessing the vizualisations	Medium
		USN-2	Can make his own visualizations	Create his own visualizations	Low

5.2 SOLUTION ARCHITECTURE

Solution architecture is a complex process – with many sub-processes – that bridges the gap between business problems and technology solutions. Its goals are to:

- Find the best tech solution to solve existing business problems.
- Describe the structure, characteristics, behavior, and other aspects of the software to project stakeholders.
- Define features, development phases, and solution requirements.
- Provide specifications according to which the solution is defined, managed, and delivered.



6. PROJECT PLANNING AND SCHEUDLING

6.1 TECHNICAL ARCHITECTURE

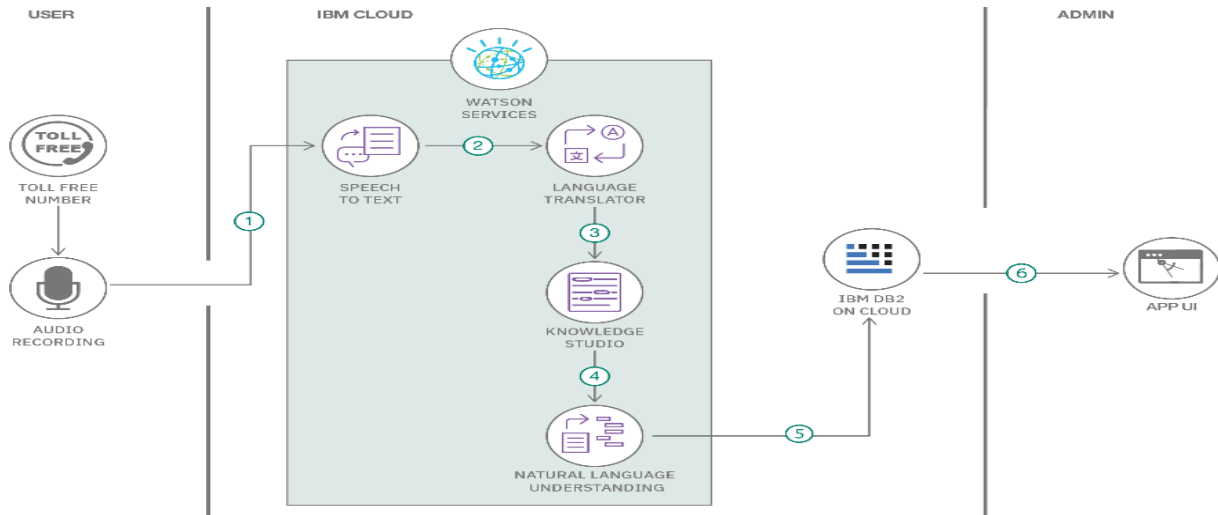


Table-1 : Components & Technologies:

S.No	Component	Description	Technology
1.	User Interface	How user interacts with application e.g. Web UI, Mobile App, Chatbot etc.	HTML, CSS, JavaScript / Angular Js /React Js etc.
2.	Application Logic-1	Logic for a process in the application	Java / Python
3.	Application Logic-2	Logic for a process in the application	IBM Watson STT service
4.	Application Logic-3	Logic for a process in the application	IBM Watson Assistant
5.	Database	Data Type, Configurations etc.	MySQL, NoSQL, etc.
6.	Cloud Database	Database Service on Cloud	IBM DB2, IBM Cloudant etc.
7.	File Storage	File storage requirements	IBM Block Storage or Other StorageService or Local Filesystem
8.	External API-1	Purpose of External API used in the application	IBM Weather API, etc.

9.	External API-2	Purpose of External API used in the application	Aadhar API, etc.
10.	Machine Learning Model	Purpose of Machine Learning Model	Object Recognition Model, etc.
11.	Infrastructure (Server / Cloud)	Application Deployment on Local System / Cloud Local Server Configuration: Cloud Server Configuration :	Local, Cloud Foundry, Kubernetes, etc.

Table-2: Application Characteristics:

S.No	Characteristics	Description	Technology
1.	Open-Source Frameworks	List the open-source frameworks used	Technology of Opensource framework
2.	Security Implementations	List all the security / access controls implemented, use of firewalls etc.	e.g. SHA-256, Encryptions, IAM Controls, OWASP etc.
3.	Scalable Architecture	Justify the scalability of architecture (3 – tier, Micro-services)	Technology used
4.	Availability	Justify the availability of application (e.g. use of load balancers, distributed servers etc.)	Technology used
5.	Performance	Design consideration for the performance of the application (number of requests per sec, use of Cache, use of CDN's) etc.	Technology used

7. CODING AND SOLUTION

7.1 FEATURE 1

```
<section id="hero" class="d-flex align-items-center">
<div class="container">
  <div class="row">
    <div class="col-lg-6 d-flex flex-column justify-content-center pt-4
pt-lg-0 order-2 order-lg-1" data-aos="fade-up" data-aos-delay="200">
      <h1>A COMPARATIVE STUDY OF TOP GLOBAL
UNIVERSITIES IN DATA ANALYTICS</h1>
      <h2>Analysing top global universities with BI-tool IBM
Cognos</h2>
      <div class="d-flex justify-content-center justify-content-lg-start">
        <a href="#about" class="btn-get-started scrollto">Get
Started</a>
        <a href="https://www.youtube.com/watch?v=jDDaplaOz7Q"
class="glightbox btn-watch-video"><i class="bi bi-play-
circle"></i><span>Watch Video</span></a>
      </div>
    </div>
    <div class="col-lg-6 order-1 order-lg-2 hero-img" data-
aos="zoom-in" data-aos-delay="300">
       </div></div></div></section><!-- End Hero -->
```



```
<main id="main">
```

```
<!-- ===== Clients Section ===== -->
```

```
<section id="clients" class="clients section-bg">
```

```
<div class="container">
```

```
<div class="row" data-aos="zoom-in">
```

```
<!-- <div class="col-lg-2 col-md-4 col-6 d-flex align-items-center
justify-content-center"> -->
```

```
<!--  -->
```

```
<!-- </div> -->
```

```
<!-- <div class="col-lg-2 col-md-4 col-6 d-flex align-items-center
justify-content-center"> -->
```

```
<!--  -->
```

```
</div></div>
```

```
</div>
```

```
</section><!-- End Cliens Section -->
```

```
<br>
```

```
<br>
```

```
<br>
```

```
<!-- ===== About Us Section ===== -->
```

```
<section id="about" class="about">
```

```
<div class="container" data-aos="fade-up">
```

```
<div class="section-title">
```

```
<h2>About Us</h2>
```

```
</div>
```

```
<p style="align-items: center;padding : 5px;">Welcome to  
[Website/Platform Name], your comprehensive guide to global  
university rankings and comparisons. We are dedicated to providing  
users with a centralized platform to explore and understand the various  
rankings of top universities across the globe.</p>
```

```
<div class="row content">
```

```
<div class="col-lg-6">
```

```
<h3>Our Mission</h3>
```

```
<p>
```

Our mission is to simplify the complex landscape of university rankings, making it easier for students, academics, and education enthusiasts to navigate and compare the different assessments provided by renowned publications and organizations.

```
</p>
```

```
<h3>Our Value</h3>
```

<p>We value transparency, accuracy, and accessibility. We believe in providing reliable and easily understandable information to aid students and professionals in their educational journey.

</p>

</div>

<div class="col-lg-6 pt-4 pt-lg-0">

<i class="ri-check-double-line"></i>Aggregate Comparison: We bring together rankings from leading sources, including QS World University Rankings, Times Higher Education, Academic Ranking of World Universities (ARWU), and more, to offer a holistic view of university performance.

<i class="ri-check-double-line"></i>Data Visualization Tools:Our platform includes interactive tools that enable users to visualize and compare rankings. Charts, graphs, and intuitive visual aids help users comprehend and analyze the data effectively.

<i class="ri-check-double-line"></i>Understanding Methodologies: We provide insights into the methodologies of each ranking organization. Understanding these unique criteria is vital to comprehending why universities rank differently in various lists.

<i class="ri-check-double-line"></i>Historical Trends and Analysis:Users can track the historical trends of universities' rankings, facilitating informed decision-making.

Learn More

</div>

</div></div>

</section><!-- End About Us Section -->

FEATURE 2

```
body {
  font-family: "Open Sans", sans-serif;
  color: #111111;
  /* background-color:black; */
}
a {
  color: #47b2e4;
  text-decoration: none;
}
a:hover {
  color: #73c5eb;
  text-decoration: none;
}
h1,h2,h3,h4,h5,h6 {
  font-family: "Jost", sans-serif;
}
/*-----
# Preloader
----- */
#preloader {
  position: fixed;
  top: 0;
```

```
left: 0;
right: 0;
bottom: 0;
z-index: 9999;
overflow: hidden;
background: #5472a5;
}
#preloader:before {
  content: "";
  position: fixed;
  top: calc(50% - 30px);
  left: calc(50% - 30px);
  border: 6px solid #37517e;
  border-top-color: #fff;
  border-bottom-color: #fff;
  border-radius: 50%;
  width: 60px;
  height: 60px;
  animation: animate-preloader 1s linear infinite;
}
@keyframes animate-preloader {
  0% {
    transform: rotate(0deg);
```

```

    } 100% {
        transform: rotate(360deg);
    }
}/*-----

# Back to top button
----- */

.back-to-top {
    position: fixed;
    visibility: hidden;
    opacity: 0;
    right: 15px;
    bottom: 15px;
    z-index: 996;
    background: #65add1;
    width: 40px;
    height: 40px;
    border-radius: 50px;
    transition: all 0.4s;
}

.back-to-top i {
    font-size: 24px;
    color: #fff;
    line-height: 0;}

```

```
/*-----  
# Header  
-----*/  
  
#header {  
    transition: all 0.5s;  
    z-index: 997;  
    padding: 15px 0;  
}  
  
#header.header-scrolled,  
#header.header-inner-pages {  
    background: rgba(40, 58, 90, 0.9);  
}  
  
#header .logo {  
    font-size: 30px;  
    margin: 0;  
    padding: 0;  
    line-height: 1;  
    font-weight: 500;  
    letter-spacing: 2px;  
    text-transform: uppercase
```

Navigation Menu

```
.navbar {  
  padding: 0;  
}
```

```
.navbar ul {  
  margin: 0;  
  padding: 0;  
  display: flex;  
  list-style: none;  
  align-items: center;  
}
```

```
.navbar li {  
  position: relative;  
}
```

```
.navbar a,  
.navbar a:focus {  
  display: flex;  
  align-items: center;  
  justify-content: space-between;  
  padding: 10px 0 10px 30px;  
  font-size: 15px;
```



```
font-weight: 500;
color: #fff;
white-space: nowrap;
transition: 0.3s;
}
```

```
.navbar a i,
.navbar a:focus i {
  font-size: 12px;
  line-height: 0;
  margin-left: 5px;
}
```

```
.navbar a:hover,
.navbar .active,
.navbar .active:focus,
.navbar li:hover>a {
  color: #47b2e4;
}
```

7.3 DATABASE SCHEMA

IBM COGNOS:

IBM Cognos Analytics with Watson (aka *Cognos Analytics*, and formerly known as *IBM Cognos Business Intelligence*) is a web-based integrated business intelligence suite by IBM. It provides a toolset for reporting, analytics, scorecarding, and monitoring of events and metrics. The software consists of several components designed to meet the different information requirements in a company.

Cognos Connection

Cognos Connection is the Web portal for IBM Cognos BI. It is the starting point for access to all functions provided with the suite. Using this portal, content can be searched in the form of reports, scorecards, and agents, it can be managed, structured, and displayed. In addition, the portal is used for multiple functions, for example to schedule and distribute reports, for creating tasks, administering the server.

Query Studio

Query Studio allows simple queries and self-service reports to answer basic business questions. The report layout can be customized and data can be filtered and sorted. Formatting and creation of diagrams is also supported.

Report Studio

The Report Studio is used to create management reports. It offers two different modes: The professional authoring mode enables users to access the full range of Report Studio functionality. In this mode, users can create any type of report, including charts, maps, lists, and repeat functions. In professional authoring mode all types of Data (relational or multidimensional) can be used, but dynamic data can not be displayed.

The express authoring mode has a more simple user interface, designed for non-technical users. It enables them to create traditional financial or management reports in a more focused user interface. In contrast to the professional authoring mode, the express authoring mode allows the use of dynamic data.

8. RESULTS

8.1 OUTPUT SCREENSHOTS

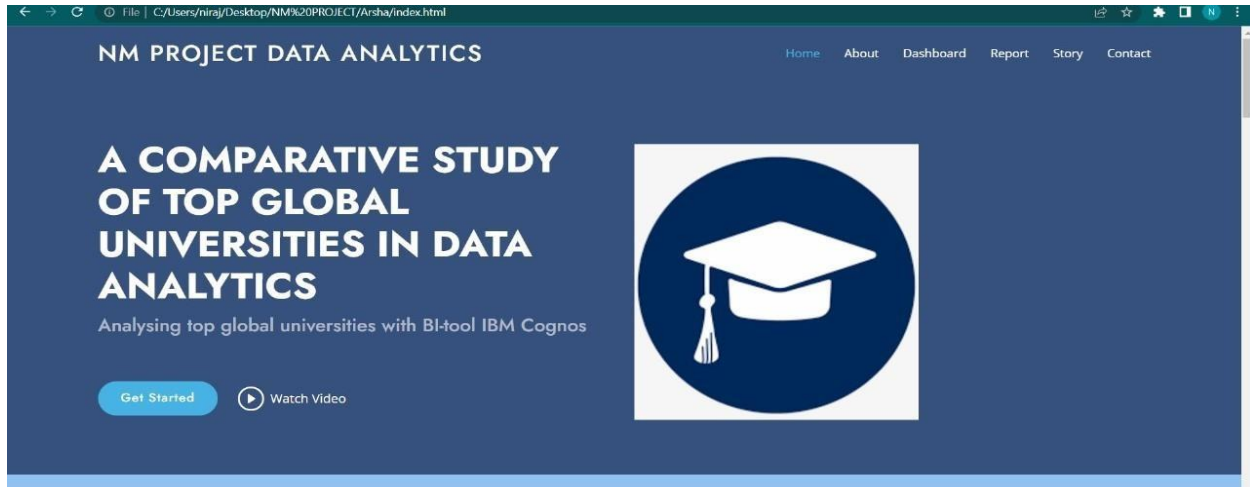


Figure 1 : Home page

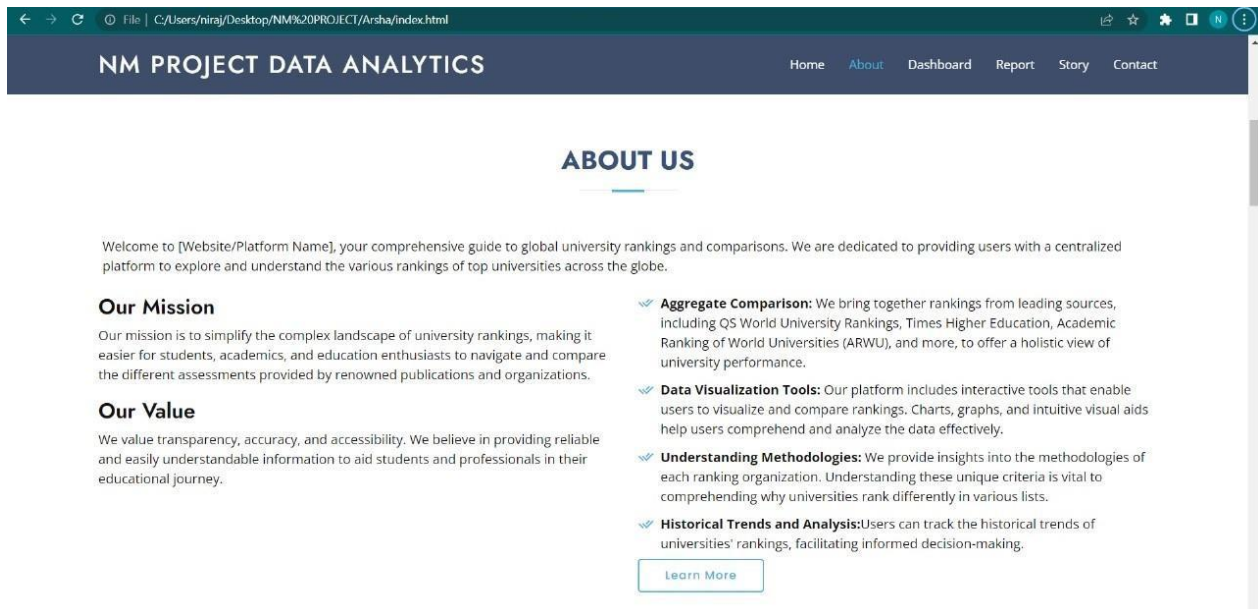


Figure 2 : About page

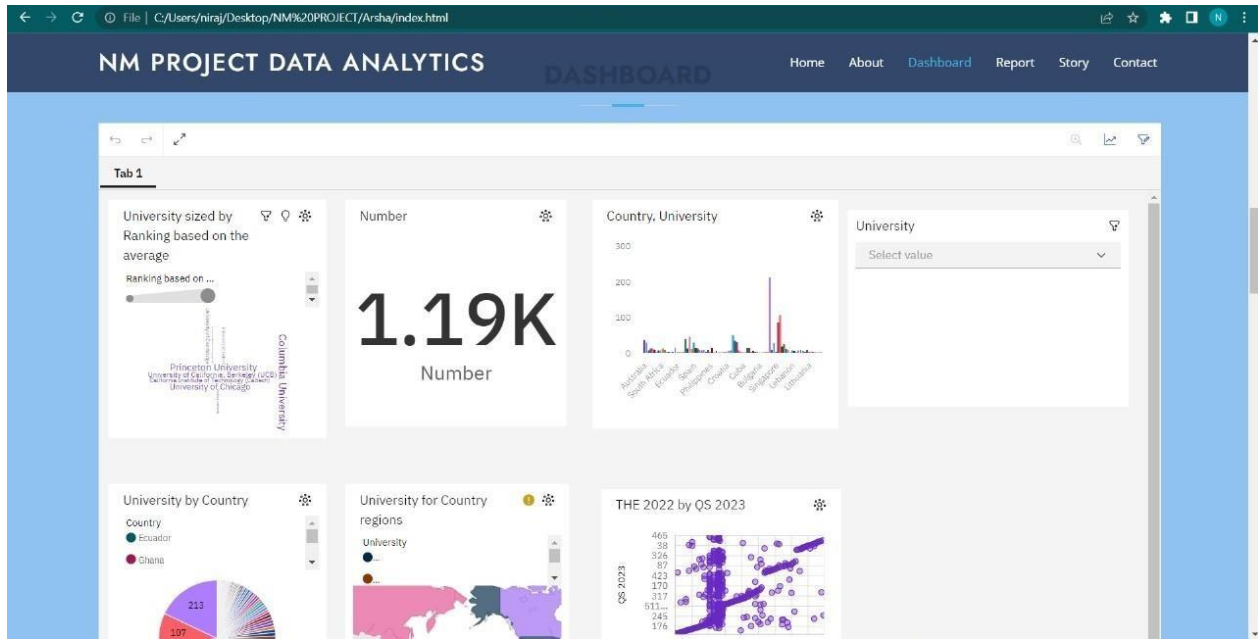


Figure 3 : Dashboard

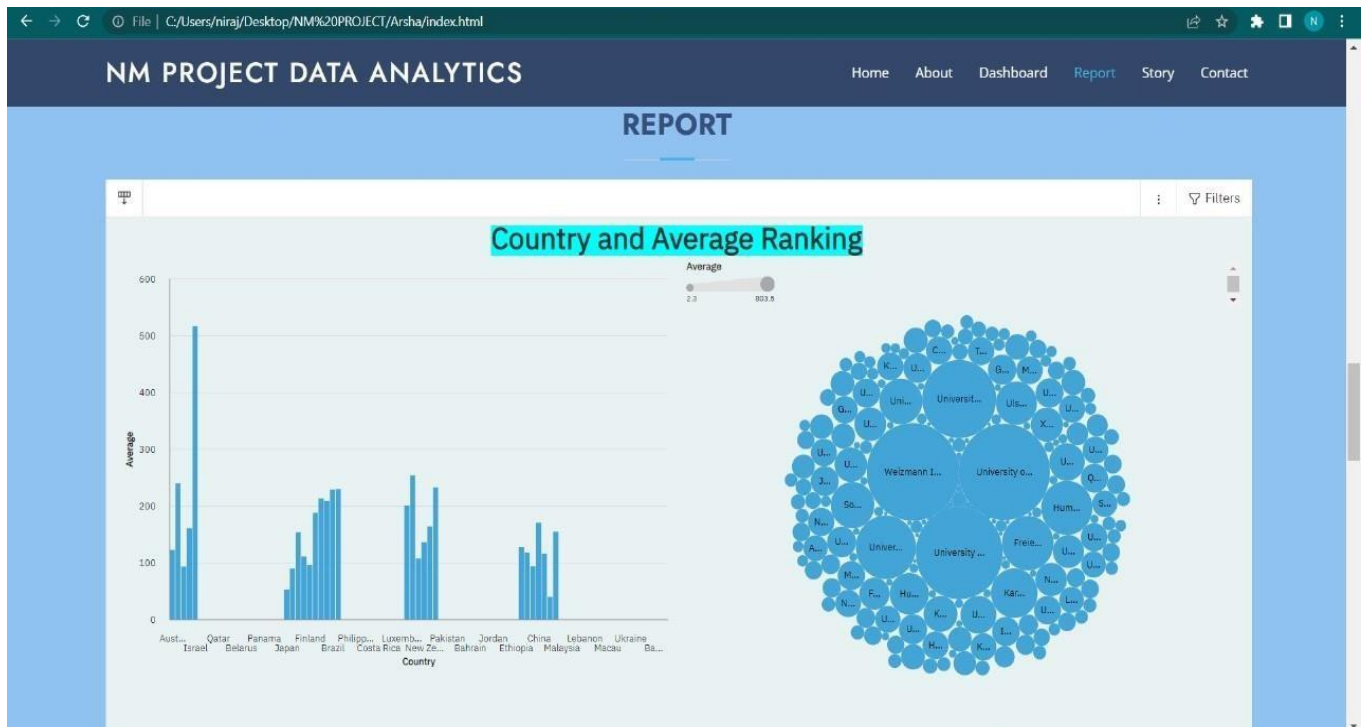


Figure 4 : Report

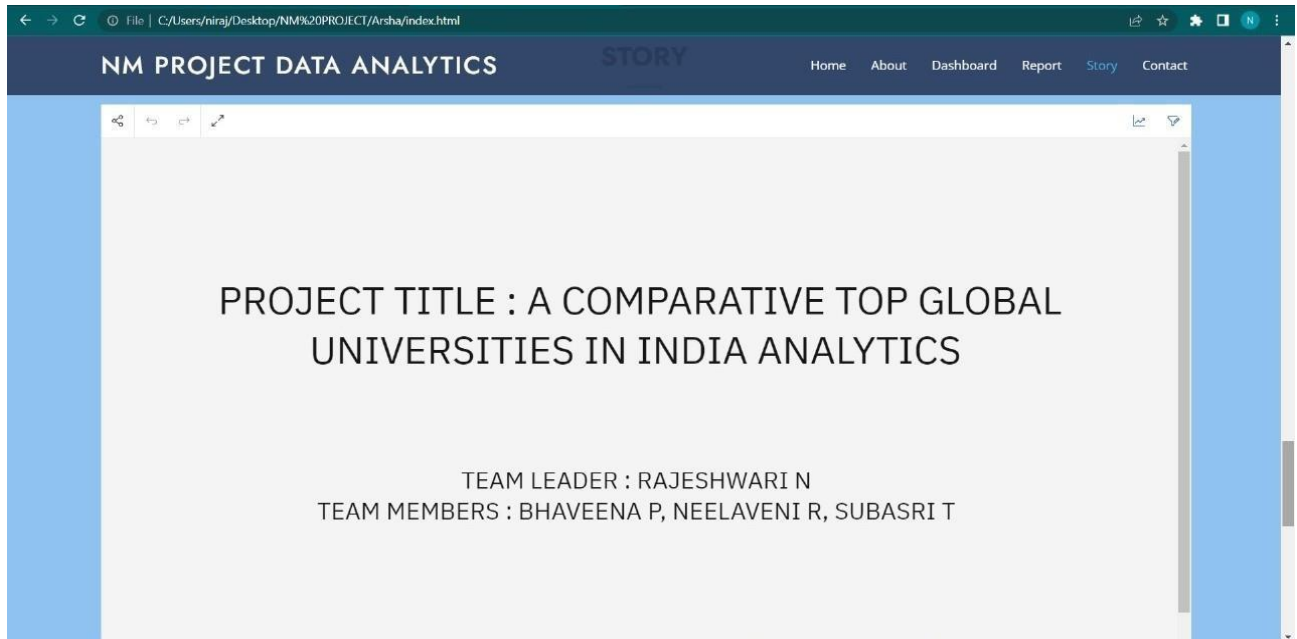


Figure 4 : Story

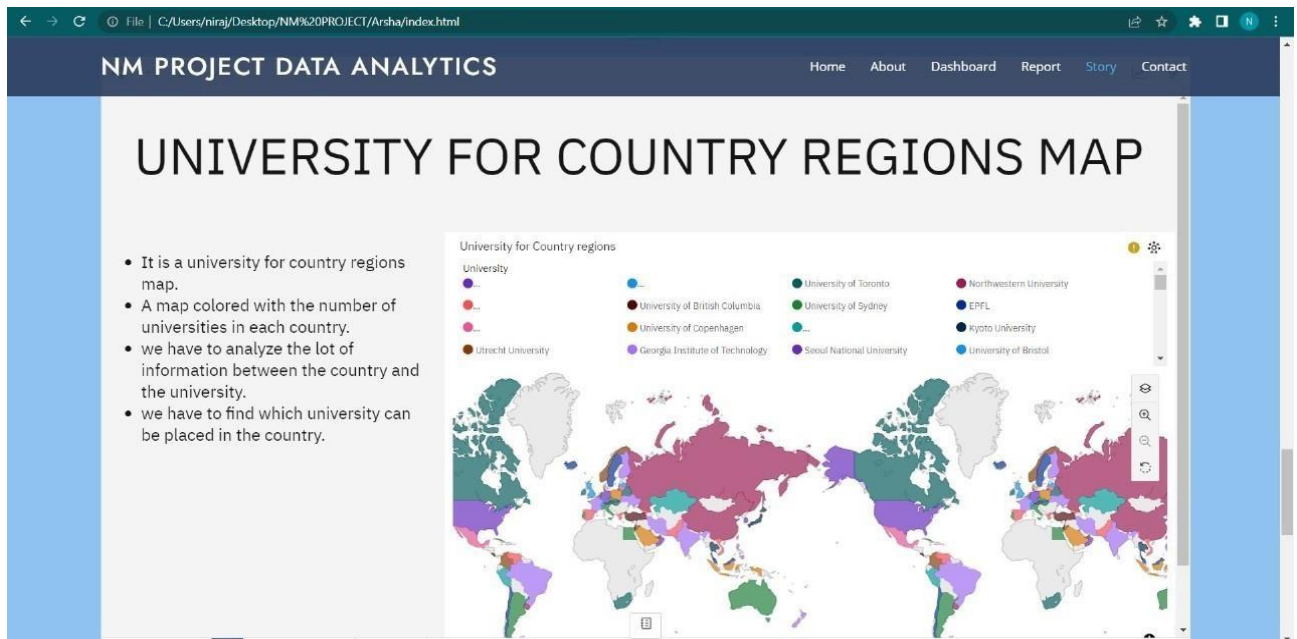


Figure 5 : Story

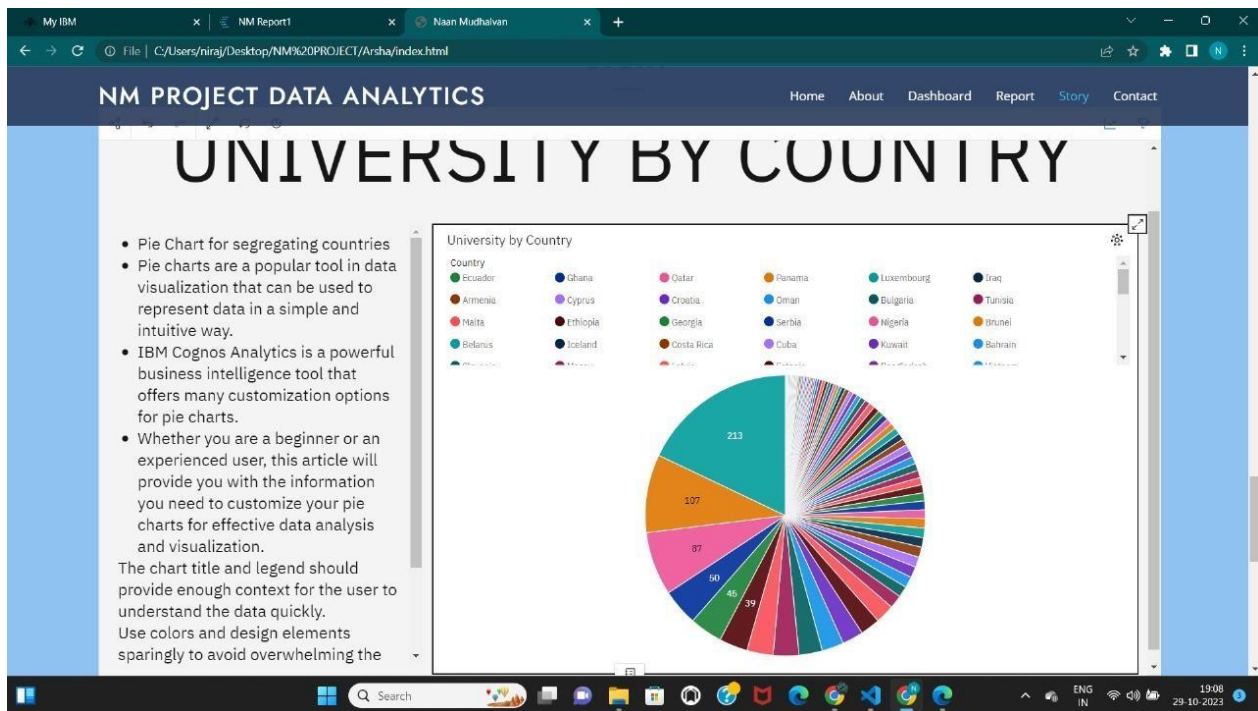


Figure 6 : Story

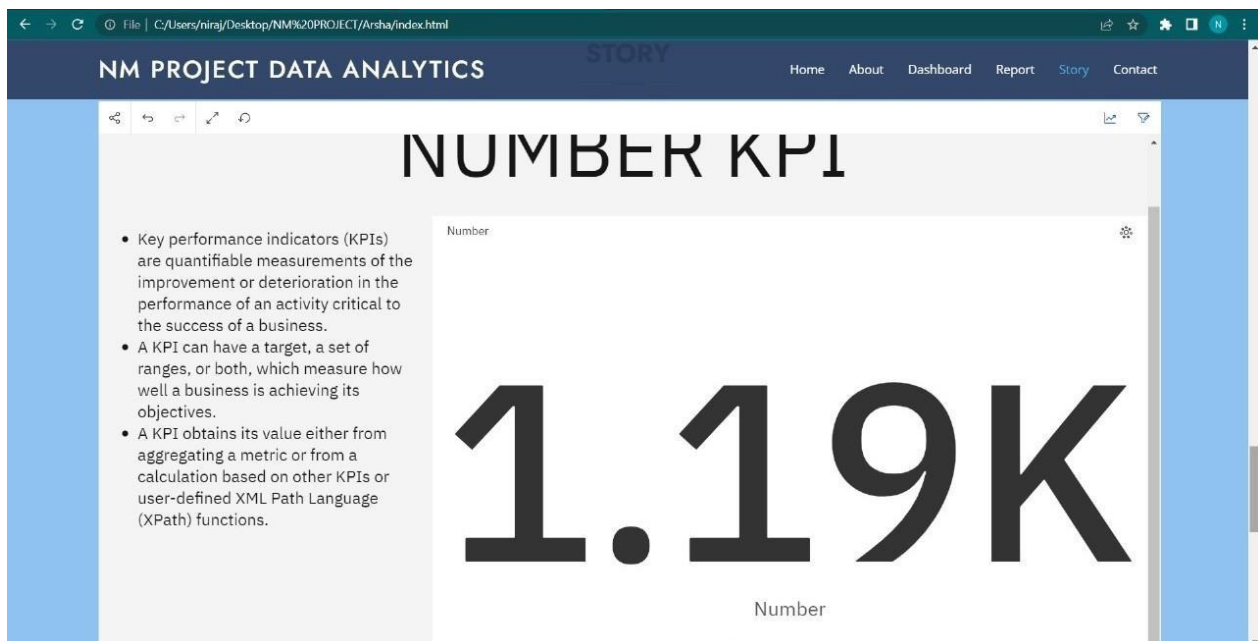


Figure 7 : Story

9. ADVANTAGES & DISADVANTAGES

Advantages:

1. Informed Decision-Making:

The project enables stakeholders, including educators, policymakers, and students, to make informed decisions about data analytics programs at various universities. This can lead to improvements in program structures and better alignment with industry needs.

2. Identification of Best Practices:

Through the comparative study, the project can identify and highlight best practices employed by top universities in integrating IBM Cognos into their data analytics programs. This information can serve as a guide for other institutions aiming to enhance their curriculum.

3. Enhanced Collaboration Between Academia and Industry:

By assessing the real-world applicability of skills taught in data analytics programs, the project contributes to closing the gap between academia and industry. This can foster collaboration, ensuring that graduates are well-prepared for professional roles.

4. Global Benchmarking:

The project offers a global benchmark for data analytics education, helping universities understand how they compare to their international counterparts. This benchmarking can drive healthy competition and motivate continuous improvement.

5. Tool-Specific Insights:

Focusing on IBM Cognos provides specific insights into the use of this tool in academic settings. This information can be valuable for both educators and the industry, offering a nuanced understanding of the tool's role in data analytics education.

Disadvantages:

1. Data Availability and Accuracy:

The project's success relies on the availability and accuracy of data from universities. Some institutions may not provide comprehensive information, potentially leading to incomplete or biased results.

2. Subjectivity in Benchmarking Criteria:

The definition of "data dominators" and the criteria for benchmarking can be subjective. Different stakeholders may have varying opinions on what constitutes excellence in data analytics education.

3. Dynamic Nature of the Field:

The field of data analytics is dynamic, with tools and techniques evolving rapidly. The project may face challenges in keeping up with the latest trends and ensuring that the study remains relevant over time.

4. Limited Generalizability:

Findings may have limited generalizability due to variations in educational systems, cultural contexts, and regional industry demands. It's crucial to interpret results with an awareness of these contextual factors.

5. Ethical Considerations:

There are ethical considerations in accessing and using data from educational institutions. Ensuring compliance with ethical standards, obtaining necessary permissions, and respecting privacy can be challenging.

6. Potential for Bias in Published Materials:

- **Disadvantage:** Relying on published materials may introduce bias, as universities may selectively present information that highlights their strengths. This can impact the objectivity of the study.

10. CONCLUSION

In conclusion, the project "Data Dominators: A Comparative Study of Top Global Universities in Data Analytics Using IBM Cognos Tool" sheds light on the diverse landscape of data analytics education. By identifying best practices, benchmarking globally, and assessing real-world applicability, the study equips stakeholders with valuable insights. While challenges like data availability and subjectivity exist, the project contributes significantly to the continuous improvement of data analytics education globally. It serves as a foundation for future research and emphasizes the importance of ethical considerations in shaping the future of data professionals' education.

11. FUTURE SCOPE

Expand the study to include emerging data analytics tools beyond IBM Cognos, providing a holistic view of the evolving technological landscape. Conduct a longitudinal analysis to track changes in data analytics programs over time, capturing the adaptability and evolution of educational approaches. Foster collaboration with industry partners to incorporate real-time industry insights into the study, ensuring alignment with current industry demands. Extend the study to assess the outcomes of students from these programs in the professional field, examining their success and contributions in the data analytics industry. Integrate qualitative data through interviews and surveys to gather nuanced perspectives from educators, students, and industry professionals, enriching the depth of the study.

12. APPENDIX

12.1 Source code

Index.html

```
<html>

<body>

  <section id="services" class="services section-bg">

    <div class="container" data-aos="fade-up"

      <div class="section-title">

        <h2>Dashboard</h2>

        <p></p>

        <iframe
src="https://us3.ca.analytics.ibm.com/bi/?perspective=dashboard&pathRef=.
my_folders%2FNM%2BDashboard&closeWindowOnLastView=true&ui
i_appbar=false&ui_navbar=false&shareMode=embedded&action=v
iew&mode=dashboard&subView=model0000018b7066f771_00000003"
width="1300" height="750" frameborder="0" gesture="media" allow="encrypted-
media" allowfullscreen=""></iframe>      </div>

      </div></div>

    </div>

  </section><!-- End Dashboard Section -->

  <!-- ===== Report Section ===== -->

  <section id="portfolio" class="portfolio section-bg">

    <!-- <section id="services" class="services section-bg"> -->

    <div class="container" data-aos="fade-up">
```

```

<div class="section-title">

    <h2>Report</h2>

    <p></p>

    <iframe
src="https://us3.ca.analytics.ibm.com/bi/?pathRef=.my_folders%2FNM%2BReport1&amp;closeWindowOnLastView=true&amp;ui_appbar=false&amp;ui_navbar=false&amp;shareMode=embedded&amp;action=edit" width="1300" height="750"
frameborder="0" gesture="media" allow="encrypted-media"
allowfullscreen=""></iframe>

</div> </div>

</section><!-- End Report Section -->

<!-- ===== Story Section ===== -->

<section id="team" class="team section-bg">

<!-- <section id="services" class="services section-bg"> -->

    <div class="container" data-aos="fade-up">

<div class="section-title">

    <h2>Story</h2>

    <p></p>

    <iframe
src="https://us3.ca.analytics.ibm.com/bi/?perspective=story&amp;pathRef=.my_folders%2FNM%2BSTORY&amp;closeWindowOnLastView=true&amp;ui_appbar=false&amp;ui_navbar=false&amp;shareMode=embedded&amp;action=view&amp;sceneId=model0000018b6b16a338_00000002&amp;sceneTime=0"
width="1300" height="750" frameborder="0" gesture="media" allow="encrypted-media" allowfullscreen=""></iframe>    </div> </div>

</div>

```

```

</section><!-- End Story Section -->

<!-- ===== Contact Section ===== -->

<section id="contact" class="contact">

  <div class="container" data-aos="fade-up">

<div class="section-title">

  <h2>TEAM</h2>

  <pre style="font-size:xx-large; background:rgb(122, 173,
207)"><PRE><b>DONE BY

  <centre>TEAM LEADER : RAJESHWARI N</centre>

TEAM MEMBERS

  BHAVEENA P NEELAVENI R SUBASRI T

</b></pre></div>

  </div> -->

</section><!-- End Contact Section -->

</main><!-- End #main --></div>

<script src="assets/vendor/aos/aos.js"></script>

<script src="assets/vendor/bootstrap/js/bootstrap.bundle.min.js"></script>

<script src="assets/vendor/glightbox/js/glightbox.min.js"></script>

<script src="assets/vendor/isotope-layout/isotope.pkgd.min.js"></script>

<script src="assets/vendor/swiper/swiper-bundle.min.js"></script>

<script src="assets/vendor/waypoints/noframework.waypoints.js"></script>

<script src="assets/vendor/php-email-form/validate.js"></script>

<!-- Template Main JS File -->

```

```
<script src="assets/js/main.js"></script>  
</body></html>
```

12.2 Github & Project Demo Link:

Github link : <https://github.com/nirajeshwari/DATA-DOMINATORS-A-COMPARATIVE-STUDY-OF-TOP-GLOBAL-UNIVERSITIES-IN-DATA-ANALYTICS>

Youtube link: <https://youtu.be/rESvRgTN7Cs?si=yktzpRbVmRoq0Ib->