DATA ANALYSIS WITH IBM COGNOS ANALYTICS PROJECT

Empowering The Future: A Literacy Rate Analysis
For A Better Future Tomorrow

Submitted by

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1. INTRODUCTION

In today's rapidly evolving global landscape, education stands as the cornerstone of progress and development. Empowering individuals through literacy not only enriches lives but also strengthens economies and fosters social harmony. Understanding the significance of literacy rates is crucial in shaping a better tomorrow. This study embarks on a comprehensive analysis, leveraging the powerful capabilities of IBM Cognos Analytics, to delve deep into the intricate patterns of literacy across diverse demographics. By exploring the data intricately, this research aims to unravel the underlying factors influencing literacy rates and pave the way for targeted interventions. As we embark on this journey, we seek to shed light on the disparities, highlight success stories, and ultimately contribute to a future where education becomes a fundamental right for every individual, empowering generations to come.

1.1. PROJECT OVERVIEW:

To know development in a society, Literacy is another proper indicator of economic development. For purpose of census, a person in age limit of seven and above, who can both write and read with understanding in any of the language is considered as a literate in India. Literacy plays a major role in the economic development of a nation. Although India has raised its current literacy rate of 74.04% (2021) from 12% at the time of Independence in 1947, its still lag behind the world average literacy rate of 84%. Compared with other nations, Republic of India has the largest illiterate population.

1.2. PURPOSE OF PROJECT:

The whole purpose of the project is to conduct a comprehensive study and analysis of literacy rates in a specific region or community and to gain the knowledge of analyzing data from the existing and produce results that could help improve the economic development of our country. The idea is to identify key factors influencing literacy levels, assess the impact of literacy on individual and societal well-being, and propose actionable recommendations to improve literacy rates. We also learn how to use the features and analyze a data using the software IBM COGNOS ANALYTICS.

2. LITERATURE SURVEY

Literacy is a fundamental human right and an essential tool for development. It is the ability to read, write, and understand information. A literate population is better equipped to participate in society, contribute to the economy, and lead healthy lives. Several studies have examined the relationship between literacy and economic development. A study by the World Bank found that a one-year increase in average adult literacy is associated with a 1.5% increase in GDP per capita. Another study, by the United Nations Development Program, found that literacy is a key factor in reducing poverty. IBM Cognos Analytics is a powerful tool that can be used to analyze literacy data. This software can be used to identify trends, patterns, and correlations in literacy data. This information can then be used to inform policy decisions and interventions aimed at improving literacy rates. A study by the International Literacy Association found that using IBM Cognos Analytics to track literacy progress in developing countries led to a significant increase in literacy rates in those countries. Another study, by the World Literacy Foundation, found that using IBM Cognos Analytics to identify low-literacy communities led to targeted interventions that significantly improved literacy rates in those communities. These studies demonstrate the effectiveness of using IBM Cognos Analytics to improve literacy rates. IBM Cognos Analytics can be a valuable tool in the fight to improve literacy rates around the world.

2.1. EXISTING PROBLEM

In this section, you should review existing research and literature related to India's literacy rate. Discuss the current state of literacy in India and any associated challenges or issues. This section serves as a foundation for understanding the context and problems surrounding literacy rates in India.

2.1.1. Literacy Rate Trends in India

Discuss the historical trends in India's literacy rate. Highlight how literacy rates have changed over the years and provide statistical data to support your claims.

2.1.2. Regional Disparities

Examine regional disparities in literacy rates within India. Discuss which states or regions have higher or lower literacy rates and potential reasons for these disparities.

2.1.3. Gender Disparities

Explore gender disparities in literacy rates. Discuss the differences in male and female literacy rates and the underlying factors contributing to these disparities.

2.1.4. Socioeconomic Factors

Examine how socioeconomic factors such as income, education, and social status influence literacy rates in India. Discuss the impact of poverty and inequality.

2.1.5. Quality of Education

Discuss the quality of education in India and its impact on literacy rates. Consider factors such as school infrastructure, teacher quality, and curriculum.

2.2. REFERENCES

- https://www.ijfmr.com/papers/2023/1/1409.pdf
- https://www.researchgate.net/publication/363173220 LITERACY RATE IN IN DIA IN 2022
- https://www.worldwidejournals.com/paripex/recent issues pdf/2014/May/May 2014 1400155110 f3d33 19.pdf

2.3. PROBLEM STATEMENT DEFINITION

Despite the numerous benefits of literacy, millions of people around the world are still able to read and write. This lack of literacy is a major obstacle to economic development, social progress, and individual well-being. With the rapid growth of the global economy and the increasing complexity of information, literacy is becoming even more important. Without the ability to read and write, individuals are unable to fully participate in society, contribute to the economy, or lead healthy lives.

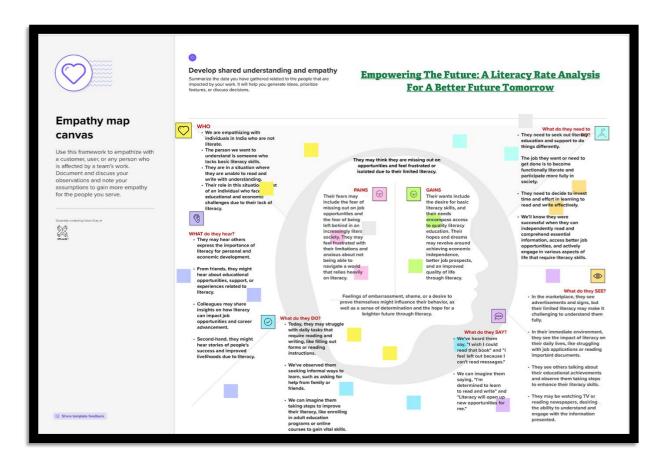
Significance of the Problem:

Literacy is a fundamental human right and an essential tool for development. Without the ability to read and write, individuals are unable to fully participate in society, contribute to the economy, or lead healthy lives. This project will provide valuable insights into the global literacy landscape and will help to develop effective interventions to improve literacy rates around the world.

3. IDEATION & PROPOSED SOLUTION

3.1. Empathy Map Canvas

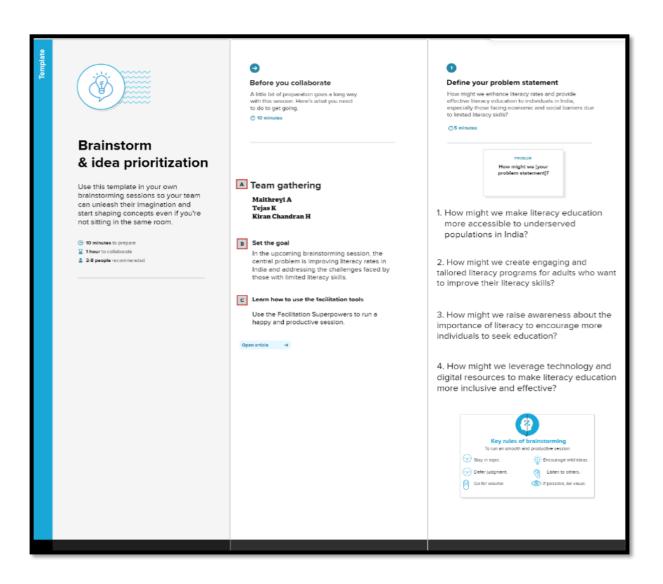
An empathy map is a simple, easy-to-digest visual that captures knowledge about a user's behaviors and attitudes. Understanding the empathy map for individuals facing literacy challenges in India provides insight into their thoughts, feelings, and motivations. They hear about the critical role of literacy in economic development and opportunities, both in formal conversations and from their social circles. They might encounter stories of success from those who have improved their literacy skills. These inputs shape their perceptions of the world. In their daily lives, they often struggle with tasks that require reading and writing, such as completing forms or comprehending instructions. Seeking informal learning from friends and family is a common behavior, but it only goes so far in addressing their limitations, especially when it comes to job applications or understanding essential documents. What needs to change is their approach. They need to actively seek out literacy education and support, recognizing that becoming functionally literate is a crucial task they must undertake. The desire to secure better job opportunities and make informed decisions drives their motivation, and success can be measured when they can independently read and understand essential information.



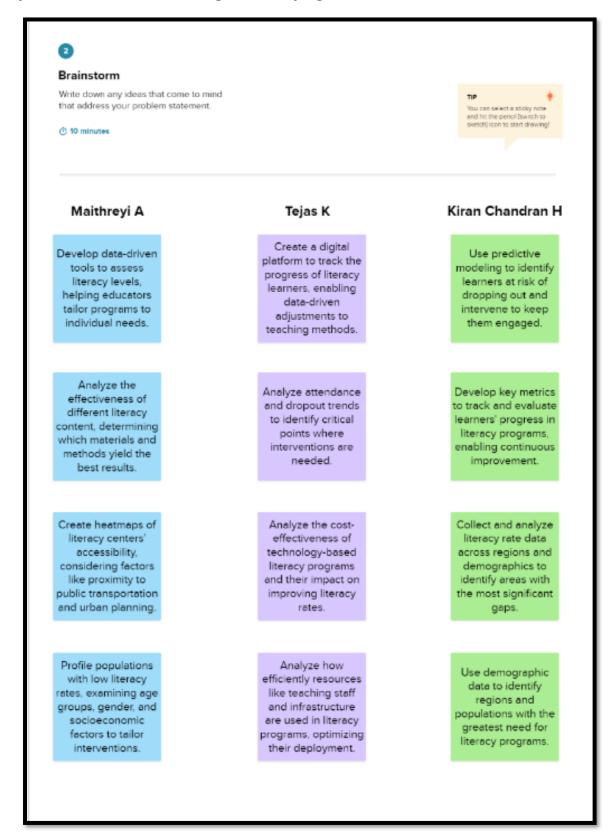
3.2. Ideation & Brainstorming

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 number of creative solutions.

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



Step-2: Brainstorm, Idea Listing and Grouping





Group ideas

Take turns sharing your ideas while clustering similar or related notes as you go. Once all sticky notes have been grouped, give each cluster a sentence-like label. If a cluster is bigger than six sticky notes, try and see if you and break it up into smaller sub-groups.

(1) 20 minute

Add customisable tags to sticky notes to make it esser to find, browde, organize, and categorize important ideas as themes within your marel.

Cluster 1: Literacy Rate Analysis

Analyze literacy rate data across regions and demographics. Profile populations with low literacy rates based on age, gender, and socioeconomic factors.

Utilize geospatial data to map areas with limited literacy resources.

Cluster 2: Program Evaluation and Improvement

Develop key metrics for tracking and evaluating learners' progress in literacy programs.

Evaluate the effectiveness of literacy materials and curricula through user feedback and performance data. Analyze
attendance and
dropout trends to
identify critical
intervention
points

Cluster 3: Resource Optimization

Optimize the allocation of funds in literacy initiatives to ensure efficient resource distribution. Assess the efficiency of resource utilization, including teaching staff and infrestructure in literacy programs.

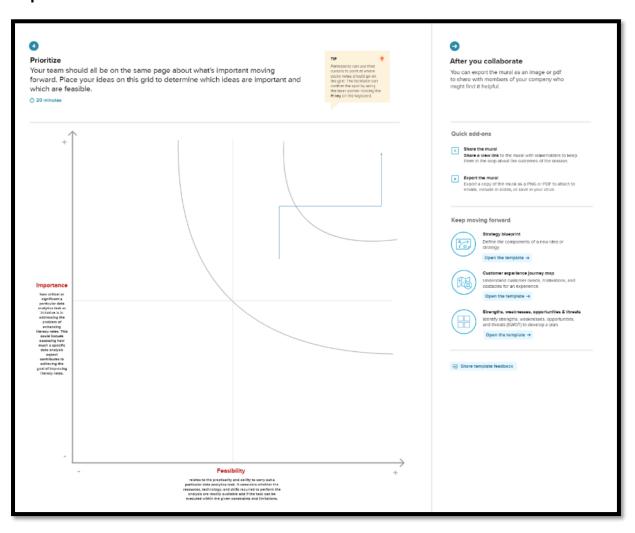
Track the budget allocation to ensure resources are deployed for maximum impact.

Cluster 4: Social Impact Measurement

Develop KPIs for measuring the social impact of improved literacy, such as increased employability and income. Analyze the influence of social media and influencers on literacy campaigns.

Assess the costeffectiveness of technology-based literacy programs and their impact on improving literacy rates.

Step-3: Idea Prioritization



4. REQUIREMENT ANALYSIS

4.1. Functional requirement

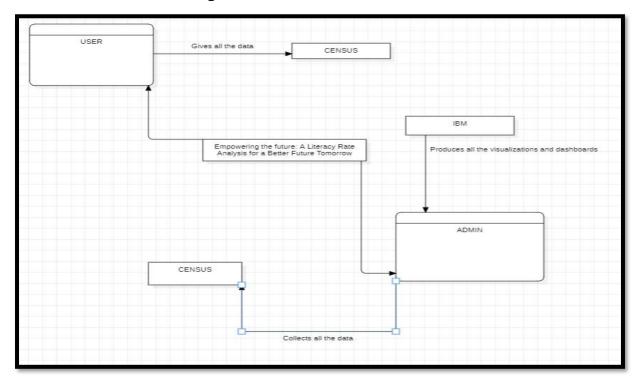
- ➤ Data Collection and Integration: Gather data on literacy rates from various reliable sources, such as government reports, educational institutions, and surveys. Include data related to different demographics, regions, and age groups for comprehensive analysis. Algorithms must be developed to process and analyze the collected data.
- ➤ **User Authentification and Authorization:** The system should provide a user authentication mechanism for different roles (e.g., admin, user). Admins should have the authority to add, modify, and delete user accounts with different levels of access.
- ➤ Data Visualisations and Reports: Create interactive visualizations, such as charts, graphs, and maps, to present the analyzed data. Generate comprehensive reports summarizing the findings, including key insights and recommendations. These are done with the IBM Cosmo Analytics software.
- ➤ **Geographical Analysis**: Enable visualizations based on geographical regions so that it would be easy to analyze the literacy rates with respect to regions.
- ➤ **Performance and Scalability:** Design the system to handle large volumes of data efficiently. Optimize algorithms and database queries for fast processing and analysis. Ensure scalability to accommodate future growth in data size and user base.

4.2. Non-Functional requirements

- ➤ **Usability:** The system should be easy to use and navigate, even for non-technical users.
- > **Scalability:** The system should be able to handle a large amount of data and users without compromising its performance.
- > **Reliability:** The system should be highly available and reliable, with minimal downtime or errors.
- > **Security:** The system should be designed with security in mind, with appropriate measures in place to protect user data and prevent unauthorized access.
- Accessibility: The system should be accessible to users with disabilities, following relevant accessibility guidelines.
- ➤ **Compatibility:** The system should be compatible with a range of devices and browsers, ensuring a consistent user experience across platforms.
- ➤ **Maintainability:** The system should be easy to maintain and update, with clear documentation and well-structured code.
- ➤ **Performance:** The system should be designed to have fast response times and minimal latency, ensuring a smooth user experience.

5. PROJECT DESIGN

5.1. Data Flow Diagrams & User Stories



User Type	Functional Requirement (Epic)	User Story Number	User Story / Task	Acceptance criteria	Priority	Release
Customer (Mobile user)	Registration	USN-1	As a user, I can register for the application by entering my email, password, and confirming my password.	I can access my account / dashboard	High	Sprint-1
		USN-2	As a user, I will receive confirmation email once I have registered for the application	I can receive confirmation email & click confirm	High	Sprint-1
		USN-3	As a user, I can register for the application through Facebook	I can register & access the dashboard with Facebook Login	Low	Sprint-2
		USN-4	As a user, I can register for the application through Gmail		Medium	Sprint-1
	Login	USN-5	As a user, I can log into the application by entering email & password		High	Sprint-1
	Dashboard					
Customer (Web user)						
Customer Care Executive						
Administrator						
	Ī					

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, behaviour, 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 & SCHEDULING

6.1. TECHNICAL ARCHITECTURE

USER:	IBM COSMO ANALYTICS:	ADMIN:
Gives all the details through the census.	1. All the details are uploaded here and connects to the IBM sever. 2. Visualisations are made with the data received. 3. All the dashboards, stories, and visualisations are done correctly. 4. This work gets saved in IBM server.	1. Gathers all the details from the user and uploads it in IBM Cosmo Analytics. 2. Makes all the analysis and determines the illiteracy rate of each category. 3. Shows the results.

6.2. **SPRINT PLANNING & ESTIMATION**

Sprint	Functional Requirement (Epic)	User Story Number	User Story / Task	Story Points	Priority	Team Members
Sprint-1	Analysing	USN-1	As an authority I should analyse the situation of literacy rates and collect data	2	High	Member 1
Sprint-1	Requirements	USN-2	As an authority, I should list the requirements to put my plans into action	1	Low	Member 2
Sprint-2	Planning	USN-3	As an authority I should plan the action points for improving the literacy rates	2	High	Member 3
Sprint-1	Visualizations	USN-4	As an authority I should visualize the outputs and find the areas of improvement	2	High	Member 4

6.3. SPRINT DELIVERY SCHEDULE

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	20	2 Days	28 Oct 2023	29 Nov 2023	20	06 Nov 2023
Sprint-2	20	2 Days	30 Oct 2022	31 Nov 2023		06 Nov 2023
Sprint-3	20	3 Days	01 Nov 2023	03 Nov 2023		06 Nov 2023
Sprint-4	20	3 Days	04 Nov 2023	06 Nov 2023		06 Nov 2023

7. <u>CODING & SOLUTIONING (Explain the features added in the project along with code)</u>

7.1. Feature 1

We have done a responsive dashboard, story, report that is integrated into the web application. we have used IBM Cognos to do the data visualization and to create a dashboard, story, report.

7.2. Feature 2

We have integrated our Dashboard, story, report in website using HTML, CSS, JavaScript to provide a fully functional analysis report.

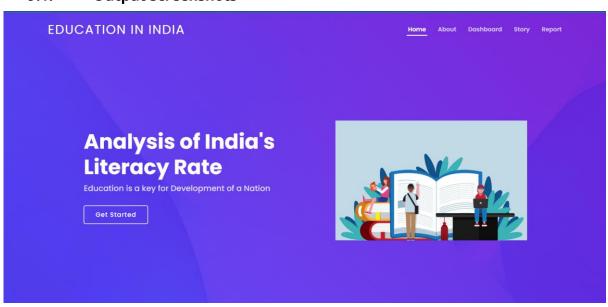
8. PERFORMANCE TESTING

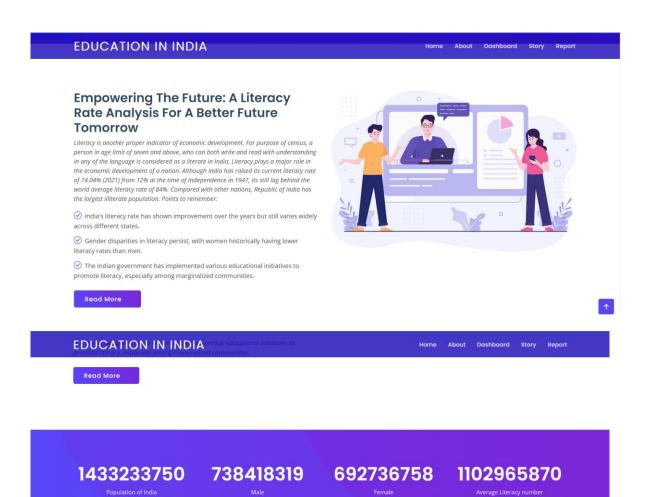
8.1. Performance Metrics

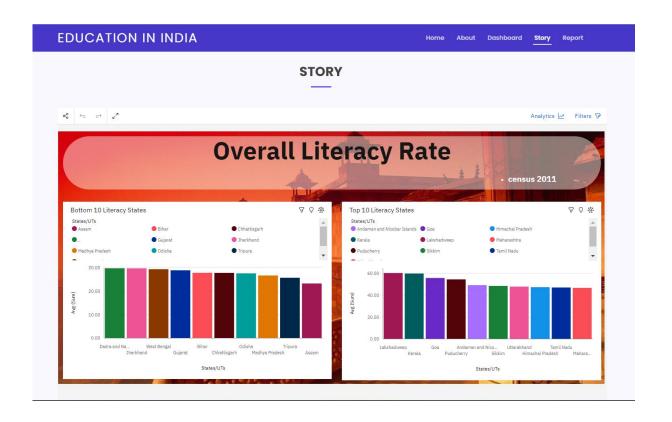
S.No.	Parameter	Screenshot / Values
1.	Dashboard design	No of Visualizations / Graphs - 11
2.	Data Responsiveness	Minimum time 3 seconds and Maximum 6 seconds
3.	Amount Data to Rendered (DB2 Metrics)	Null since we used cognos analytics and not IBM cloud
4.	Utilization of Data Filters	Yes
5.	Effective User Story	No of Scene Added - 4 scenes
6.	Descriptive Reports	No of Visualizations / Graphs - 1

9. RESULTS

9.1. Output Screenshots





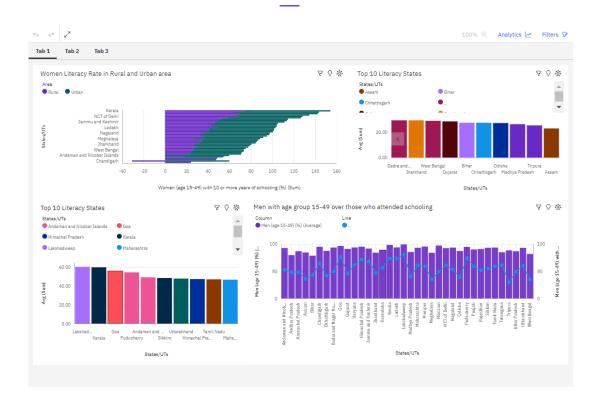


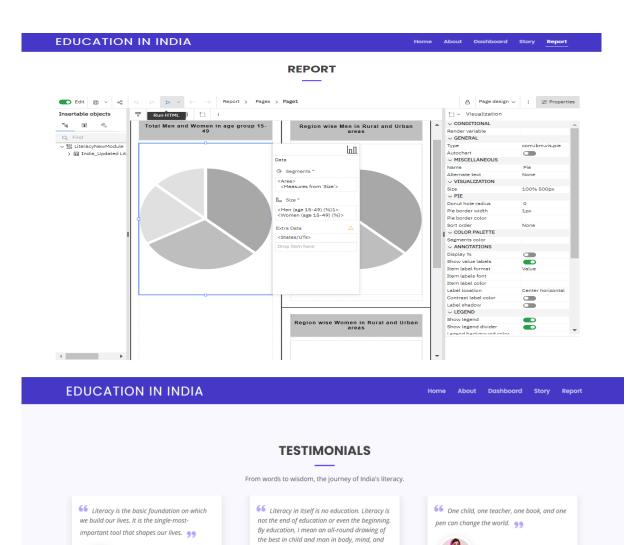


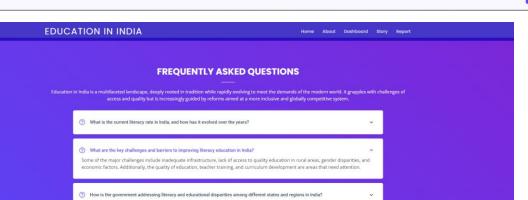
EDUCATION IN INDIA

Home About Dashboard Story Report

DASHBOARD







Mahatma Gandhi

(7) What are the initiatives and programs in place to promote adult literacy and lifelong learning in India?

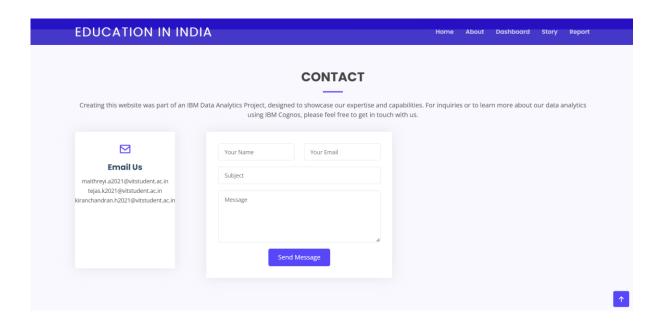
•0000

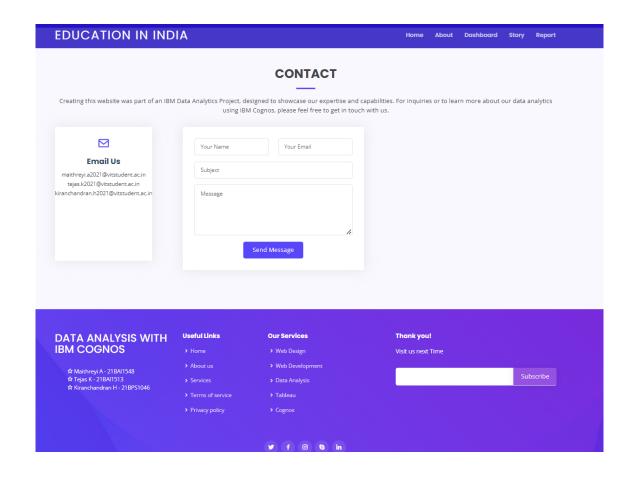
Dr.A.P.J.Abdul Kalam

ace Scientist

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Malala Yousafzai





10. ADVANTAGES & DISADVANTAGES

India's literacy rate has both advantages and disadvantages, and these can have a significant impact on the country's socio-economic and educational development. Here are some of the key advantages and disadvantages associated with India's literacy rate:

Advantages:

- ➤ Improved Access to Information: Higher literacy rates mean that more people can access and understand information, whether through reading newspapers, books, or digital media. This can lead to better-informed citizens.
- ➤ **Workforce Development:** A literate population provides a more skilled and adaptable workforce, which is essential for economic growth and attracting foreign investments.
- ➤ **Health Awareness:** Literacy is often associated with improved health awareness and health-seeking behaviors, as literate individuals are more likely to understand health-related information and make informed choices.
- ➤ **Empowerment of Women:** Increased literacy rates among women can lead to greater gender equality and empowerment, as educated women are more likely to participate in the workforce and engage in decision-making processes.
- ➤ **Economic Growth:** Literacy is a significant factor in economic development. It can lead to higher income levels, entrepreneurship, and the ability to engage in various economic activities.
- > Social and Political Participation: Literate individuals are more likely to engage in social and political activities, including voting and participating in community initiatives, which can lead to better governance.

Disadvantages:

- ➤ **Disparities:** India faces significant regional and gender disparities in literacy rates. Certain states and rural areas have lower literacy rates than urban areas, and there are considerable differences in literacy between men and women.
- ➤ **Quality of Education:** Despite progress in improving literacy rates, the quality of education in India varies widely. Many students lack access to high-quality education, which can limit their long-term prospects.
- ➤ **High Dropout Rates:** High dropout rates in schools, particularly in rural areas, hinder the overall progress in literacy. Factors like poverty, lack of access to schools, and child labor contribute to this issue.
- Overcrowded Classrooms: In many parts of India, classrooms are overcrowded, which can lead to a lack of individual attention and a lower quality of education.
- ➤ **Unemployment and Underemployment:** High literacy rates, without corresponding employment opportunities, can lead to unemployment and underemployment, particularly among educated youth.
- ➤ **Linguistic Diversity:** India's linguistic diversity poses challenges to education and literacy. Ensuring that people can access education and information in their native languages is a complex task.

> **Skill Mismatch:** The education system may not always align with the demands of the job market, leading to a mismatch between the skills people possess and the skills employers require.

In summary, while higher literacy rates in India bring many advantages, they are not without their challenges. The disparities in access to education, quality of education, and the employment landscape need to be addressed to ensure that the benefits of increased literacy are shared by all segments of the population.

11. CONCLUSION

Here is a possible conclusion for the topic Empowering The Future: A Literacy Rate Analysis in India using IBM Cognos analytics For A Better Future Tomorrow:

The literacy rate is one of the key indicators of the social and economic development of a country. It reflects the level of education, skills, and knowledge of the population, which are essential for achieving the Sustainable Development Goals (SDGs) and ensuring a better future for all. However, India still faces significant challenges and disparities in the literacy rate across regions, genders, and social groups.

Using IBM Cognos analytics, we conducted a data analysis on the literacy rate of India from 2010 to 2020, based on the data from the World Bank¹ and the Ministry of Statistics and Programme Implementation. We explored the trends, patterns, correlations, and predictions of the literacy rate using various charts, graphs, and dashboards. We also compared the literacy rate with other variables such as GDP per capita, population, and human development index (HDI).

Some of the main findings of our analysis are:

- The literacy rate in India has increased from 69.3% in 2011 to 74.4% in 2018, with an average annual growth rate of 1.1%.
- The literacy rate varies widely across states, with Kerala having the highest literacy rate of 96.2%, and Andhra Pradesh having the lowest literacy rate of 66.4% in 2018.
- There is a wide gender gap in the literacy rate in India, with 84.7% for males and 70.3% for females in 2018¹. The gender gap is more pronounced in rural areas than in urban areas.
- There is a strong positive correlation between the literacy rate and the GDP per capita (r = 0.76), and the literacy rate and the HDI (r = 0.83), indicating that higher literacy rate is associated with higher economic and human development.
- The literacy rate in India is projected to reach 76.9% by 2025, and 79.3% by 2030, based on the linear regression model. However, this projection assumes that the current trends and policies will continue, and does not account for the potential impacts of the COVID-19 pandemic, which may have disrupted the education and learning opportunities for many people, especially the vulnerable groups.

12. FUTURE SCOPE

The future scope of the topic Empowering The Future: A Literacy Rate Analysis in India using IBM Cognos analytics For A Better Future Tomorrow is as follows:

- The topic can be extended to include other dimensions of literacy, such as functional literacy, digital literacy, and financial literacy, which are also important for the empowerment of the people and the society.
- The topic can be further explored to examine the causes and consequences of the literacy rate in India, such as the socio-cultural factors, the policy interventions, the economic outcomes, and the environmental impacts.
- The topic can be applied to other countries or regions, to compare and contrast
 the literacy rate and its implications for the development and well-being of the
 people and the planet.
- The topic can be updated and refined with the latest and more granular data and information, to capture the changes and challenges in the literacy rate, especially in the context of the COVID-19 pandemic and its aftermath.
- The topic can be communicated and disseminated to a wider audience, to raise awareness and advocacy for the importance and urgency of improving the literacy rate and empowering the future.

13. APPENDIX

13.1. Source Code

INDEX.HTML FILE:

```
link
href="https://fonts.googleapis.com/css?family=Open+Sans:300,300i,400,400i,600
,600i,700,700i|Roboto:300,300i,400,400i,500,500i,600,600i,700,700i|Poppins:30
0,300i,400,400i,500,500i,600,600i,700,700i" rel="stylesheet">
  <link href="assets/vendor/aos/aos.css" rel="stylesheet">
  <link href="assets/vendor/bootstrap/css/bootstrap.min.css"</pre>
rel="stylesheet">
  <link href="assets/vendor/bootstrap-icons/bootstrap-icons.css"</pre>
rel="stylesheet">
  <link href="assets/vendor/boxicons/css/boxicons.min.css" rel="stylesheet">
  <link href="assets/vendor/glightbox/css/glightbox.min.css"</pre>
rel="stylesheet">
  <link href="assets/vendor/swiper/swiper-bundle.min.css" rel="stylesheet">
  <link href="assets/css/style.css" rel="stylesheet">
</head>
<body>
  <header id="header" class="fixed-top ">
    <div class="container d-flex align-items-center justify-content-between">
      <h1 class="logo"><a href="index.html">Education in India</a></h1>
      <!-- Uncomment below if you prefer to use an image logo -->
      <!-- <a href="index.html" class="logo"><img src="assets/img/logo.png"
      <nav id="navbar" class="navbar">
        <l
         <a class="nav-link scrollto active" href="#hero">Home</a>
          <a class="nav-link scrollto" href="#About">About</a>
         <a class="nav-link scrollto"</li>
href="#Dashboard">Dashboard</a>
         <a class="nav-link scrollto " href="#Story">Story</a>
         <a class="nav-link scrollto" href="#Report">Report</a>
        <i class="bi bi-list mobile-nav-toggle"></i></i>
      </nav><!-- .navbar -->
    </div>
```

```
</header><!-- End Header -->
  <!-- ===== Hero Section ====== -->
  <section id="hero" class="d-flex align-items-center">
    <div class="container-fluid" data-aos="fade-up">
      <div class="row justify-content-center">
        <div class="col-xl-5 col-lg-6 pt-3 pt-lg-0 order-2 order-lg-1 d-flex</pre>
flex-column justify-content-center">
          <h1>Analysis of India's Literacy Rate</h1>
          <h2>Education is a key for Development of a Nation</h2>
          <div><a href="#about" class="btn-get-started scrollto">Get
Started</a></div>
        </div>
        <div class="col-xl-4 col-lg-6 order-1 order-lg-2 hero-img" data-</pre>
aos="zoom-in" data-aos-delay="150">
          <img src="https://blogassets.leverageedu.com/blog/wp-</pre>
content/uploads/2020/04/29183738/Types-of-Education.jpg" class="img-fluid
animated" alt="">
        </div>
      </div>
    </div>
  </section><!-- End Hero -->
  <main id="main">
    <!-- ===== About Section ====== -->
    <section id="about" class="about">
      <div class="container">
        <div class="row">
          <div class="col-lg-6 order-1 order-lg-2" data-aos="zoom-in" data-</pre>
aos-delay="150">
            <img src="assets/img/about.jpg" class="img-fluid" alt="">
          </div>
          <div class="col-lg-6 pt-4 pt-lg-0 order-2 order-lg-1 content" data-</pre>
aos="fade-right">
```

```
<h3>Empowering The Future: A Literacy Rate Analysis For A Better
Future Tomorrow</h3>
           Literacy is another proper indicator of economic development.
For purpose of census, a person in age limit of seven and above, who can both
write and read with understanding in any of the language is considered as a
literate in India. Literacy plays a major role in the economic development of
a nation. Although India has raised its current literacy rate of 74.04%
(2021) from 12% at the time of Independence in 1947, its still lag behind the
world average literacy rate of 84%. Compared with other nations, Republic of
India has the largest illiterate population.
             Points to remember:
           <u1>
             <i class="bi bi-check-circle"></i> India's literacy rate
has shown improvement over the years but still varies widely across different
states.
             <i class="bi bi-check-circle"></i> Gender disparities in
literacy persist, with women historically having lower literacy rates than
men.
             <i class="bi bi-check-circle"></i> The Indian government
has implemented various educational initiatives to promote literacy,
especially among marginalized communities.
           <a href="#" class="read-more">Read More <i class="bi bi-long-</pre>
arrow-right"></i></a>
         </div>
       </div>
      </div>
    </section><!-- End About Section -->
    <!-- ===== Counts Section ====== -->
    <section id="counts" class="counts">
      <div class="container">
       <div class="row counters">
         <div class="col-lg-3 col-6 text-center">
```

```
<span data-purecounter-start="0" data-purecounter-</pre>
end="1433233750" data-purecounter-duration="1" class="purecounter"></span>
           Population of India
         </div>
         <div class="col-lg-3 col-6 text-center">
           <span data-purecounter-start="0" data-purecounter-end="738418319"</pre>
data-purecounter-duration="1" class="purecounter"></span>
           Male
         </div>
         <div class="col-lg-3 col-6 text-center">
            <span data-purecounter-start="0" data-purecounter-end="692736758"</pre>
data-purecounter-duration="1" class="purecounter"></span>
           Female
         </div>
         <div class="col-lg-3 col-6 text-center">
           <span data-purecounter-start="0" data-purecounter-</pre>
end="1102965870" data-purecounter-duration="1" class="purecounter"></span>
           Average Literacy number
         </div>
       </div>
      </div>
    </section><!-- End Counts Section -->
    <!-- ===== Services Section ====== -->
    <section id="Story" class="services section-bg">
      <div class="container" data-aos="fade-up">
       <div class="section-title">
         <h2>Story</h2>
       </div>
        <iframe
src="https://us1.ca.analytics.ibm.com/bi/?perspective=story&pathRef=.my_f
olders%2FProject%2FLitStory&closeWindowOnLastView=true&ui_appbar=fals
e&ui_navbar=false&shareMode=embedded&action=view&sceneId=mode
10000018ba4ec7f5e 00000000&sceneTime=0"
```

```
width="1350" height="900" frameborder="0" gesture="media"
allow="encrypted-media" allowfullscreen=""></iframe>
    </section><!-- End Services Section -->
    <!-- ===== Features Section ====== -->
    <section id="Dashboard" class="features">
     <div class="container" data-aos="fade-up">
       <div class="section-title">
         <h2>Dashboard</h2>
       </div>
       <iframe
src="https://us1.ca.analytics.ibm.com/bi/?perspective=dashboard&pathRef=.
my_folders%2FLiteracyRate&closeWindowOnLastView=true&ui_appbar=false&
amp;ui navbar=false&shareMode=embedded&action=view&mode=dashboard
& subView=model0000018ba4989893_00000002"
       width="1350" height="900" frameborder="0" gesture="media"
allow="encrypted-media" allowfullscreen=""></iframe>
     </div>
    </section><!-- End Features Section -->
    <section id="Report" class="features">
     <div class="container" data-aos="fade-up">
       <div class="section-title">
         <h2>Report</h2>
       </div>
       <iframe
src="https://us1.ca.analytics.ibm.com/bi/?pathRef=.my_folders%2FProject%2FLit
Report&closeWindowOnLastView=true&ui_appbar=false&ui_navbar=false
&shareMode=embedded&action=edit"
       width="1350" height="900" frameborder="0" gesture="media"
allow="encrypted-media" allowfullscreen=""></iframe>
     </div>
    </section>
    <!-- ===== Testimonials Section ====== -->
    <section id="testimonials" class="testimonials section-bg">
     <div class="container" data-aos="fade-up">
       <div class="section-title">
```

```
<h2>Testimonials</h2>
          From words to wisdom, the journey of India's literacy.
        </div>
        <div class="testimonials-slider swiper" data-aos="fade-up" data-aos-</pre>
delay="100">
          <div class="swiper-wrapper">
            <div class="swiper-slide">
              <div class="testimonial-item">
                  <i class="bx bxs-quote-alt-left quote-icon-left"></i></i>
                  Literacy is the basic foundation on which we build our
lives. It is the single-most-important tool that shapes our lives.
                  <i class="bx bxs-quote-alt-right quote-icon-right"></i></i>
                <img src="assets/img/testimonials/testimonials-1.jpg"</pre>
class="testimonial-img" alt="">
                <h3>Dr.A.P.J.Abdul Kalam</h3>
                <h4>11th President of India & Aerospace Scientist</h4>
              </div>
            </div><!-- End testimonial item -->
            <div class="swiper-slide">
              <div class="testimonial-item">
                  <i class="bx bxs-quote-alt-left quote-icon-left"></i>
                  Literacy in itself is no education. Literacy is not the end
of education or even the beginning. By education, I mean an all-round drawing
of the best in child and man in body, mind, and spirit.
                  <i class="bx bxs-quote-alt-right quote-icon-right"></i>
                <img src="assets/img/testimonials/testimonials-2.jpg"</pre>
class="testimonial-img" alt="">
                <h3>Mahatma Gandhi</h3>
```

```
<h4>Father of Indian Nation</h4>
              </div>
            </div><!-- End testimonial item -->
            <div class="swiper-slide">
              <div class="testimonial-item">
                  <i class="bx bxs-quote-alt-left quote-icon-left"></i></i>
                  One child, one teacher, one book, and one pen can change
the world.
                  <i class="bx bxs-quote-alt-right quote-icon-right"></i></i>
                <img src="assets/img/testimonials/testimonials-3.jpg"</pre>
class="testimonial-img" alt="">
                <h3>Malala Yousafzai</h3>
                <h4>Education Activist
                </h4>
              </div>
            </div><!-- End testimonial item -->
            <div class="swiper-slide">
              <div class="testimonial-item">
                  <i class="bx bxs-quote-alt-left quote-icon-left"></i></i>
                  The only way to educate oneself is to be educated in a
school, and this implies some kind of organization.
                  <i class="bx bxs-quote-alt-right quote-icon-right"></i></i>
                <img src="assets/img/testimonials/testimonials-4.jpg"</pre>
class="testimonial-img" alt="">
                <h3>Jawaharlal Nehru</h3>
                <h4>Former Prime Minister of India</h4>
              </div>
            </div><!-- End testimonial item -->
            <div class="swiper-slide">
```

```
<div class="testimonial-item">
                 <i class="bx bxs-quote-alt-left quote-icon-left"></i>
                 Education is the manifestation of perfection already in
man.
                 <i class="bx bxs-quote-alt-right quote-icon-right"></i>
               <img src="assets/img/testimonials/testimonials-5.jpg"</pre>
class="testimonial-img" alt="">
               <h3>Swami Vivekananda</h3>
               <h4>Indian monastic and philosopher</h4>
             </div>
           </div><!-- End testimonial item -->
         </div>
         <div class="swiper-pagination"></div>
       </div>
     </div>
   </section><!-- End Testimonials Section -->
   <section id="faq" class="faq">
     <div class="container" data-aos="fade-up">
       <div class="section-title">
         <h2>Frequently Asked Questions</h2>
         Education in India is a multifaceted landscape, deeply rooted in
tradition while rapidly evolving to meet the demands of the modern world.
           It grapples with challenges of access and quality but is
increasingly guided by reforms aimed at a more inclusive and globally
competitive system.
       </div>
       <div class="faq-list">
         <u1>
```

```
<i class="bx bx-help-circle icon-help"></i> <a data-bs-</pre>
toggle="collapse" class="collapse" data-bs-target="#faq-list-1">What is the
current literacy rate in India, and how has it evolved over the years? <i
class="bx bx-chevron-down icon-show"></i><i class="bx bx-chevron-up icon-
close"></i></a>
             <div id="faq-list-1" class="collapse show" data-bs-</pre>
parent=".faq-list">
                 The current literacy rate in India is approximately 74.04%
(as per the 2011 Census). Over the years, there has been significant progress
in increasing literacy rates, with a notable improvement from 64.83% in 2001.
However, there is still work to be done to achieve higher literacy rates and
reduce disparities.
               </div>
           <i class="bx bx-help-circle icon-help"></i> <a data-bs-</pre>
toggle="collapse" data-bs-target="#faq-list-2" class="collapsed">What are the
key challenges and barriers to improving literacy education in India? <i
class="bx bx-chevron-down icon-show"></i><i class="bx bx-chevron-up icon-
close"></i></a>
             <div id="faq-list-2" class="collapse" data-bs-parent=".faq-</pre>
list">
                 Some of the major challenges include inadequate
infrastructure, lack of access to quality education in rural areas, gender
disparities, and economic factors. Additionally, the quality of education,
teacher training, and curriculum development are areas that need attention.
               </div>
           <i class="bx bx-help-circle icon-help"></i> <a data-bs-</pre>
toggle="collapse" data-bs-target="#faq-list-3" class="collapsed">How is the
government addressing literacy and educational disparities among different
states and regions in India? <i class="bx bx-chevron-down icon-show"></i><i
class="bx bx-chevron-up icon-close"></i></a>
```

```
<div id="faq-list-3" class="collapse" data-bs-parent=".faq-</pre>
list">
                 The government has implemented various programs and
initiatives like Sarva Shiksha Abhiyan (SSA) and Rashtriya Madhyamik Shiksha
Abhiyan (RMSA) to bridge educational disparities across states. Financial
allocation and policy focus are often adjusted based on the specific needs of
different regions.
               </div>
           <i class="bx bx-help-circle icon-help"></i> <a data-bs-</pre>
toggle="collapse" data-bs-target="#faq-list-4" class="collapsed">What are the
initiatives and programs in place to promote adult literacy and lifelong
learning in India? <i class="bx bx-chevron-down icon-show"></i><i class="bx</pre>
bx-chevron-up icon-close"></i></a>
             <div id="faq-list-4" class="collapse" data-bs-parent=".faq-</pre>
list">
                 Adult literacy programs like the National Literacy Mission
(NLM) and the Saakshar Bharat Mission have been launched to promote adult
literacy. Additionally, vocational training and skill development programs
are often integrated into adult education initiatives to support lifelong
learning.
               </div>
           <i class="bx bx-help-circle icon-help"></i> <a data-bs-</pre>
toggle="collapse" data-bs-target="#faq-list-5" class="collapsed">How does the
quality of education in India affect literacy rates, and what steps are being
taken to enhance the quality of education across the country? <i class="bx
bx-chevron-down icon-show"></i><i class="bx bx-chevron-up icon-
close"></i></a>
             <div id="faq-list-5" class="collapse" data-bs-parent=".faq-</pre>
list">
```

The quality of education is a critical factor in ensuring literacy translates into meaningful knowledge and skills. The government is working on curriculum reforms, teacher training, and the introduction of digital learning resources to enhance the quality of education. Programs like the Atal Tinkering Labs and the National Education Policy 2020 aim to improve the overall quality of education.

```
</div>
           </div>
     </div>
   <!-- ===== Contact Section ====== -->
   <section id="contact" class="contact section-bg">
     <div class="container" data-aos="fade-up">
       <div class="section-title">
         <h2>Contact</h2>
         Creating this website was part of an IBM Data Analytics Project,
designed to showcase our expertise and capabilities. For inquiries or to
learn more about our data analytics using IBM Cognos, please feel free to get
in touch with us.
       </div>
       <div class="row">
         <div class="col-lg-3 col-md-6 d-flex align-items-stretch">
           <div class="info-box mb-4">
             <i class="bx bx-envelope"></i></i>
             <h3>Email Us</h3>
             maithreyi.a2021@vitstudent.ac.in
             tejas.k2021@vitstudent.ac.in
             kiranchandran.h2021@vitstudent.ac.in
           </div>
```

```
</div>
          <div class="col-lg-6 d-flex align-items-stretch">
            <form action="forms/contact.php" method="post" role="form"</pre>
class="php-email-form">
              <div class="row">
                <div class="col-md-6 form-group">
                   <input type="text" name="name" class="form-control"</pre>
id="name" placeholder="Your Name" required>
                </div>
                <div class="col-md-6 form-group mt-3 mt-md-0">
                   <input type="email" class="form-control" name="email"</pre>
id="email" placeholder="Your Email" required>
                </div>
              </div>
              <div class="form-group mt-3">
                <input type="text" class="form-control" name="subject"</pre>
id="subject" placeholder="Subject" required>
              </div>
              <div class="form-group mt-3">
                <textarea class="form-control" name="message" rows="5"</pre>
placeholder="Message" required></textarea>
              </div>
              <div class="my-3">
                <div class="loading">Loading</div>
                <div class="error-message"></div>
                <div class="sent-message">Your message has been sent. Thank
you!</div>
              </div>
              <div class="text-center"><button type="submit">Send
Message</button></div>
            </form>
          </div>
        </div>
      </div>
```

```
</section><!-- End Contact Section -->
 <!-- ===== Footer ===== -->
 <footer id="footer">
   <div class="footer-top">
     <div class="container">
       <div class="row">
        <div class="col-lg-3 col-md-6 footer-contact">
          <h3>Data Analysis with IBM Cognos</h3>
          <i class="bx bx-star"></i> Maithreyi A - 21BAI1548
            <i class="bx bx-star"></i> Tejas K - 21BAI1513
            <i class="bx bx-star"></i> Kiranchandran H - 21BPS1046
          </div>
        <div class="col-lg-2 col-md-6 footer-links">
          <h4>Useful Links</h4>
          <l
            <i class="bx bx-chevron-right"></i> <a</pre>
href="#">Home</a>
            <i class="bx bx-chevron-right"></i> <a href="#">About
us</a>
            <i class="bx bx-chevron-right"></i> <a</pre>
href="#">Services</a>
            <i class="bx bx-chevron-right"></i> <a href="#">Terms of
service</a>
            <i class="bx bx-chevron-right"></i> <a href="#">Privacy
policy</a>
          </div>
        <div class="col-lg-3 col-md-6 footer-links">
          <h4>Our Services</h4>
          <u1>
```

```
<i class="bx bx-chevron-right"></i> <a href="#">Web
Design</a>
             <i class="bx bx-chevron-right"></i> <a href="#">Web
Development</a>
             <i class="bx bx-chevron-right"></i> <a href="#">Data
Analysis</a>
             <i class="bx bx-chevron-right"></i> <a</pre>
href="#">Tableau</a>
             <i class="bx bx-chevron-right"></i> <a</pre>
href="#">Cognos</a>
           </div>
         <div class="col-lg-4 col-md-6 footer-newsletter">
           <h4>Thank you! </h4>
           Visit us next Time
           <form action="" method="post">
             <input type="email" name="email"><input type="submit"</pre>
value="Subscribe">
           </form>
         </div>
       </div>
      </div>
    </div>
    <div class="container">
       <div class="social-links text-center text-md-right pt-3 pt-md-0">
         <a href="#" class="twitter"><i class="bx bxl-twitter"></i></a>
         <a href="#" class="facebook"><i class="bx bxl-facebook"></i></a>
         <a href="#" class="instagram"><i class="bx bxl-instagram"></i></a>
         <a href="#" class="google-plus"><i class="bx bxl-skype"></i></a>
         <a href="#" class="linkedin"><i class="bx bxl-linkedin"></i></a>
       </div>
      </div
    </div>
```

```
</footer><!-- End Footer -->
    <a href="#" class="back-to-top d-flex align-items-center justify-content-center"><i class="bi bi-arrow-up-short"></i></a>
    <div id="preloader"></div>
    <!-- Vendor JS Files -->
    <script src="assets/vendor/purecounter/purecounter_vanilla.js"></script>
    <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/php-email-form/validate.js"></script>
    <script src="assets/js/main.js"></script>
    </body>
    </body>

        Condended File States and St
```

APP.PY FILE (FLASK):

```
from flask import Flask, render_template, request
app = Flask(__name__)
@app.route('/')
def helloworld():
    return render_template("index.html")

if __name__ == '__main__':
    app.run(debug = False)
```

13.2. GitHub & Project Demo Link

Github: https://github.com/smartinternz02/SI-GuidedProject-587473-1697029651

Project video link:

https://drive.google.com/file/d/1DCpnb0tcbqCW5nfNK0RqP53yQhx8ESig/view?usp=sharing