OLYMPIC SPORTS PERFORMANCE ANALYSIS

REPORT

Prepared By:
TEAM- BHARATH, RAHUL,VIVEK

1.INTRODUCTION

1.1 OVERVIEW

Brief description about your project.

The "olympic Sports Performance Analysis" report provides a detailed examination of Athletes' Performance in various olympic disciplines. Through insightful visualizations and data driven narratives, the report offers a deeper understanding of athletes' achievements, identifies dominant sporting nations, and highlights the impact of key factors on olympic success. This comprehensive analysis aims to shed light on the remarkable sporting prowess displayed at the olympic games.

The main idea driving our project is to leverage the available raw data and transform it into understandable and user-friendly visualizations, providing valuable insights and other relevant information. Our ultimate goal is to present a compelling and impactful project outcome.

1.2 PURPOSE

The use of this project. What can be achieved using this.

The purpose of this analysis is to gain valuable insights into athletes' performance in olympic sports. By examining data and creating visualizations, the analysis aims to understand trends, identify factors influencing success, and highlight the accomplishments of athletes and nations in the olympic games. The ultimate goal is to provide a comprehensive overview of olympic sports performance and contribute to a deeper understanding of the sporting excellence showcased on the worlds biggest athletic stage.

2. LITERATURE SURVEY

2.1 EXISTING PROBLEM

Existing approaches or method to solve this problem.

Here are few existing solutions in olympic sports Project.

Data Quality: Ensuring the accuracy, completeness, and reliability of the data collected from various sources can be a significant challenge.

Data Integration: Integration of data from diverse ~~Sola~~ sources like athlete performance, weather conditions, and venue information can be complex.

Data Volume: Dealing with large volumes of data generated during the olympics can be overwhelming and robust infra structure and storage solutions.

Real-time Analysis: Providing real-time analytics during the games can be demanding, and processing data quickly and accurately is crucial.

Visualization: Presenting complex data in a clear and intuitive way for ~~each~~ coaches, analysts, and fans to understand can be challenging.

2.2 PROPOSED SOLUTION

What is the matter or solution suggested by you?

Some potential solutions to address the problems in olympic sports data analytics project:.

Data Quality and availability: Implement data validation and verification process to ensure data accuracy and complete ness. Collaborate with sports organizations to gain access to high quality and relevant data.

Data Integration: Develop robust data integration pipelines using technologies like API's and data connectors. Utilize data ware houses or datalakes to store & manage diverse data sources efficiently.

Real-time Analysis: Optimize data processing and analysis algorithms for speed efficiently. Utilize real time data streaming & analytics problems to handle live event data.

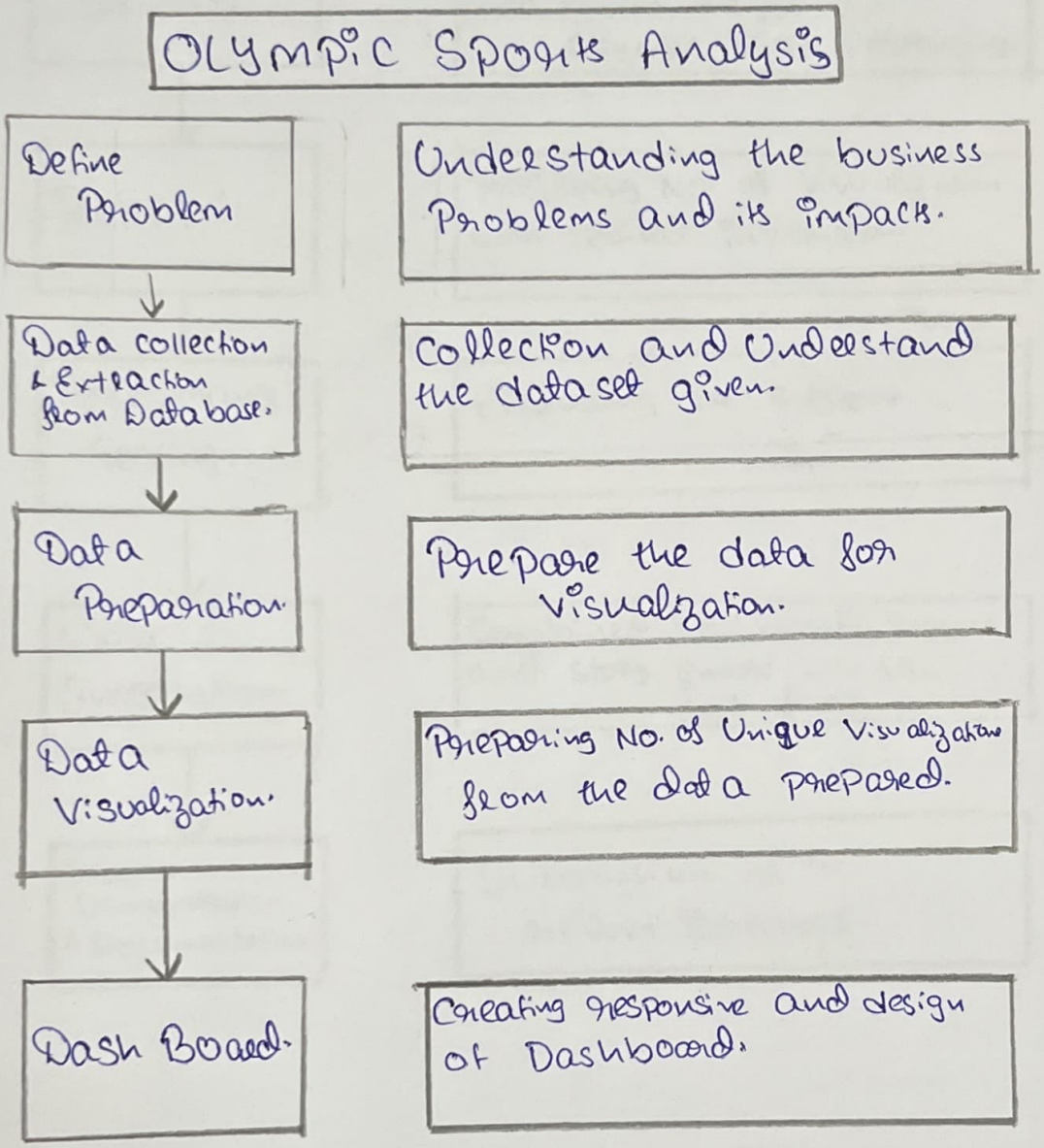
Large data Volume: Utilize cloud-based storage and scalable computing resources to handle large data volumes.

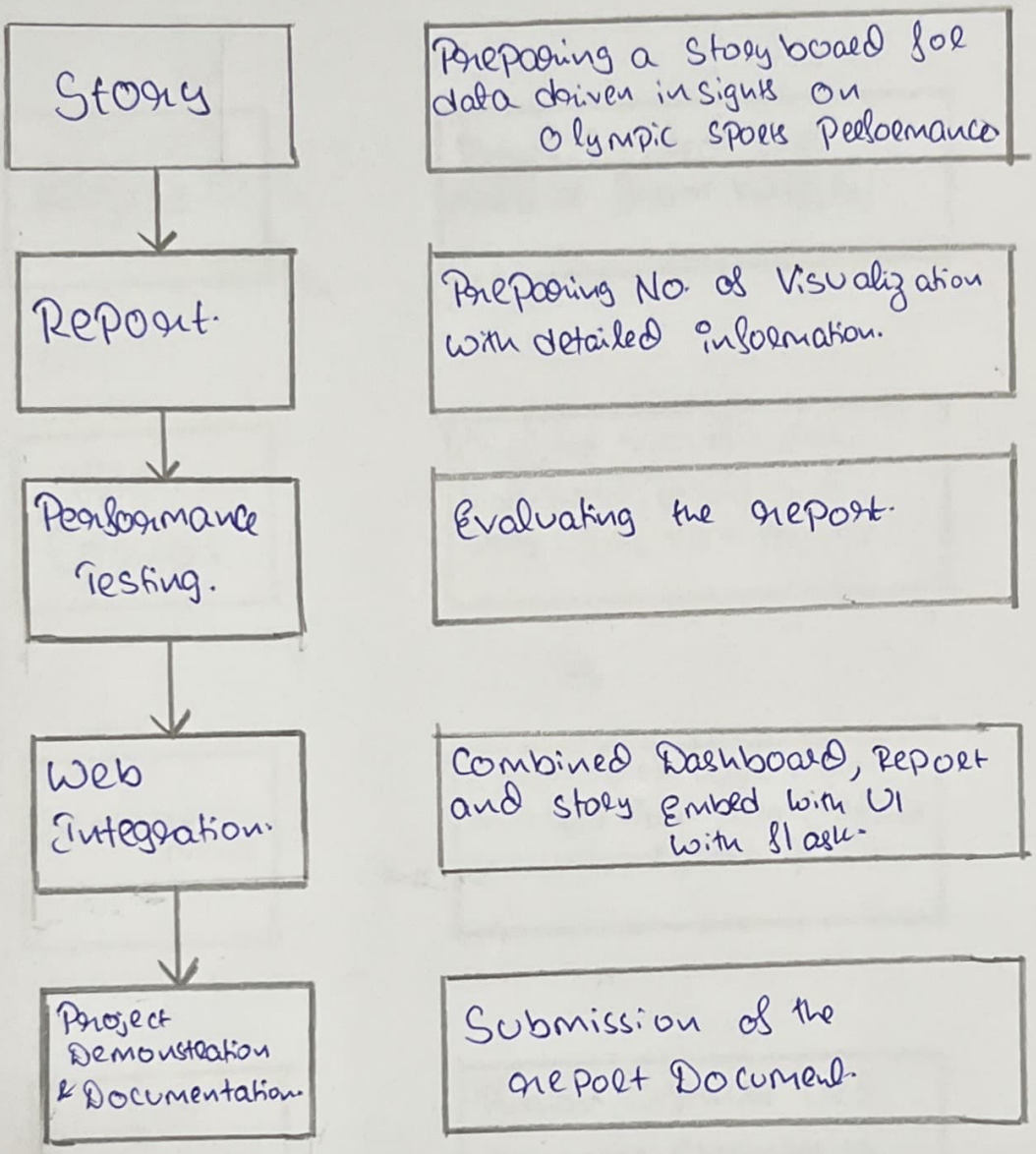
Visualization: Create interactive and intuitive visualizations to present complex data in a user friendly manner.

3. THEORETICAL ANALYSIS

3.1 BLOCK DIAGRAM

The Project flow from the begenning to the end is shown in the block diagram below.




Story
Preparing a Storyboard for data driven insights on Olympic sports Performance
Report.
Preparing No. of Visualization with detailed information.
Performance Testing.
Evaluating the report.
Web Integration.
Combined Dashboard, Report and story embed with UI with flask.
Project Demonstration & Documentation.
Submission of the report Document.

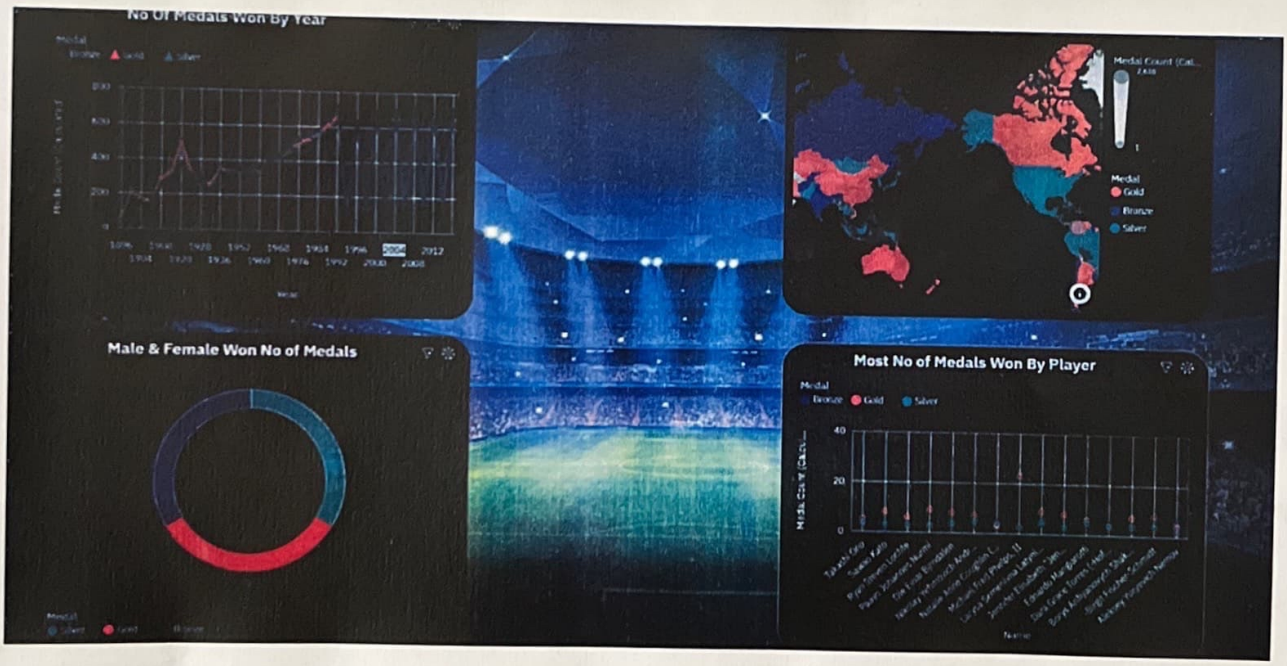
3.2 HARDWARE/SOFTWARE DESIGNING

Kaggle	Downloaded the dataset from kaggle.
IBM Cognos	Created Visualizations, Dashboard, Report, and Story using IBM cognos.
Bootstrap Made	Downloaded Web Aksha template from Bootstrapmade for web integration process.
Anaconda	Python Software used to make changes to the web template.
Spyder	It is the backbone behind web integration. We made changes to the html file and integrated the story, report and dashboard using Spyder.

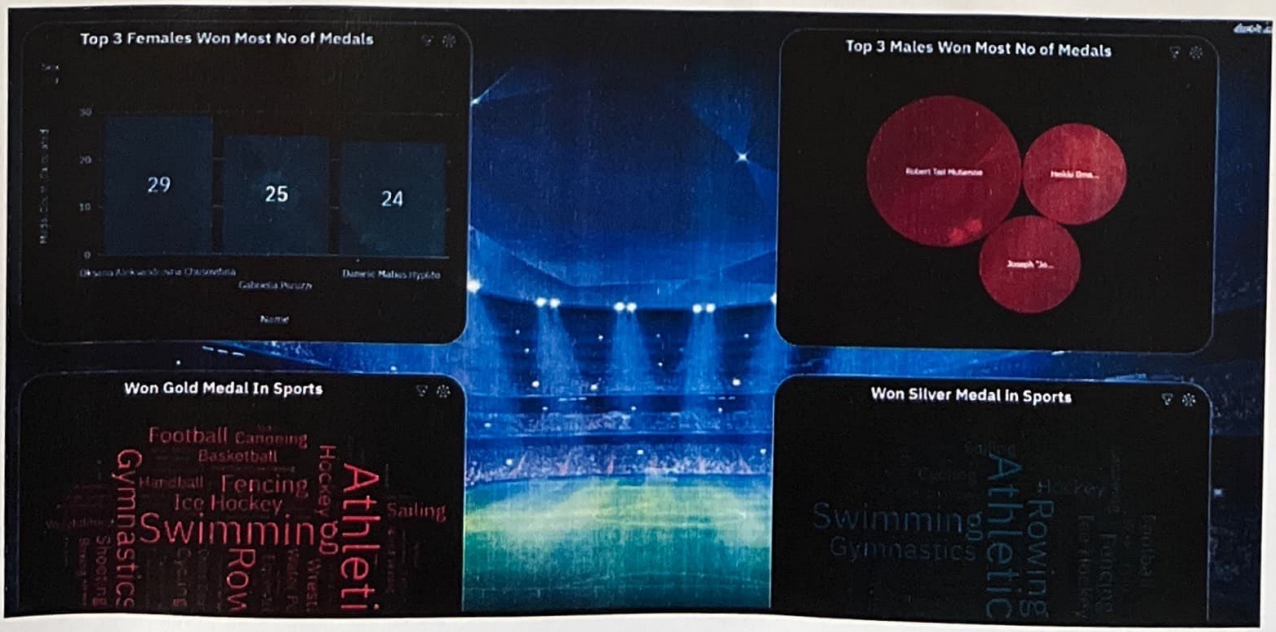
RESULT

DASHBOARD

OVERVIEW

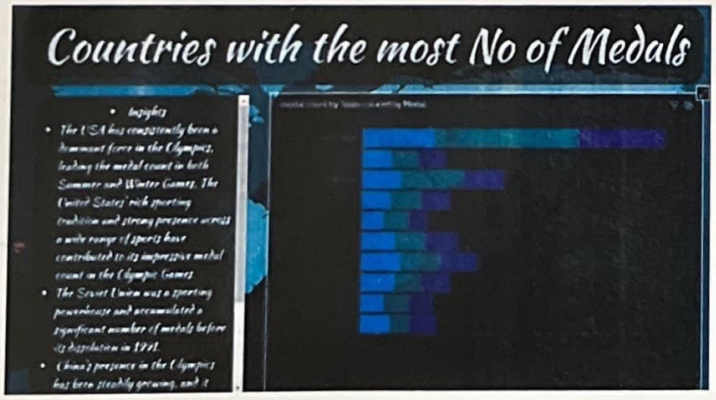


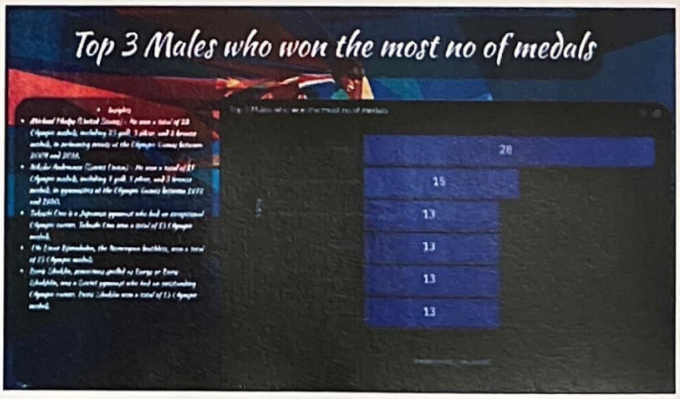
TOP MALE AND FEMALE ATHLETES

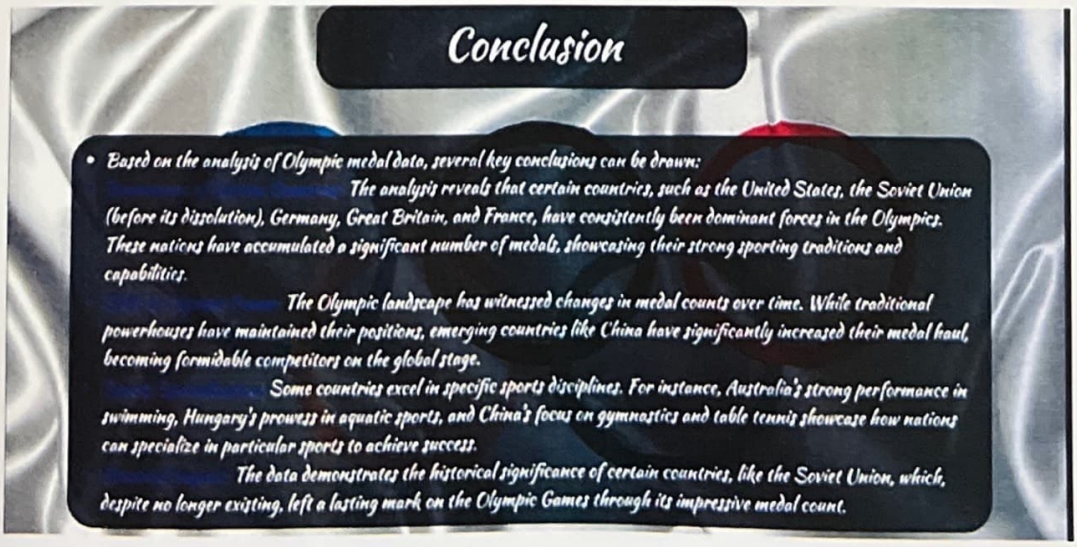


STORY


History of Olympics
Although the ancient Games were staged in Olympia, Greece, from 776 BC through 393 AD, it took 1503 years for the Olympics to return. The first modern Olympics were held in Athens, Greece, in 1896. Athletics, cycling, swimming, gymnastics, and fencing were the first five sports to kick off the Olympics.
Later on, many sports were added and removed from the Olympics. While the previous Tokyo Summer Olympics featured 33 different sports, the upcoming Paris Summer Olympics is expected to feature 32 sports with breakdancing debuting, karate, baseball, and softball gone.
Where can we uncover new
most Olympic medals won by Male & Female
Countries with more medals overall
Athletes with the most number of
What should we do?


Countries with the most No of Medals
Insights
The USA has consistently been a dominant force in the Olympics, leading the medal count in both Summer and Winter Games. The United States' rich sporting tradition and strong presence across a wide range of sports have contributed to its impressive medal count in the Olympic Games.
The Soviet Union was a sporting powerhouse and accumulated a significant number of medals before its dissolution in 1991.
China's presence in the Olympics has been steadily growing, and it


Top 3 Males who won the most no of medals
Insights
28
15
13
13
13
13


Conclusion
Based on the analysis of Olympic medal data, several key conclusions can be drawn:
The analysis reveals that certain countries, such as the United States, the Soviet Union (before its dissolution), Germany, Great Britain, and France, have consistently been dominant forces in the Olympics. These nations have accumulated a significant number of medals, showcasing their strong sporting traditions and capabilities.
The Olympic landscape has witnessed changes in medal counts over time. While traditional powerhouses have maintained their positions, emerging countries like China have significantly increased their medal haul, becoming formidable competitors on the global stage.
Some countries excel in specific sports disciplines. For instance, Australia's strong performance in swimming, Hungary's prowess in aquatic sports, and China's focus on gymnastics and table tennis showcase how nations can specialize in particular sports to achieve success.
The data demonstrates the historical significance of certain countries, like the Soviet Union, which, despite no longer existing, left a lasting mark on the Olympic Games through its impressive medal count.

REPORT

Most no of Gold Medald won by Teams

Most no of Medals count by Events

WEB INTEGRATION

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        <li><a class="nav-link scrollto active" href="#hero">Home</a></li>
        <li><a class="nav-link scrollto" href="#about">Intro</a></li>
        <li><a class="nav-link scrollto" href="#services">Dashboard</a></li>
        <li><a class="nav-link   scrollto" href="#portfolio">Story</a></li>
        <li><a class="nav-link   scrollto" href="#report">Report</a></li>
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            <li><a href="#why-us">Fun Facts</a></li>
            <li><a href="#skills">Olympic stats</a></li>
            <li><a href="#faq">FAQ</a></li>
          </ul>
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        <li><a class="getstarted scrollto" href="#about">Get Started</a></li>
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        <h1>OLYMPIC SPORTS PERFORMANCE ANALYSIS </h1>
        <h2>The Olympic Games consist of various sports divided into Summer, Winter, and Paralympic categories. Some of the sports included in th
        <div class="d-flex justify-content-center justify-content-lg-start">
          <a href="#about" class="btn-get-started scrollto">Get Started</a>
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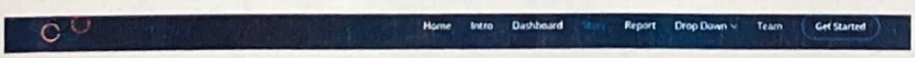
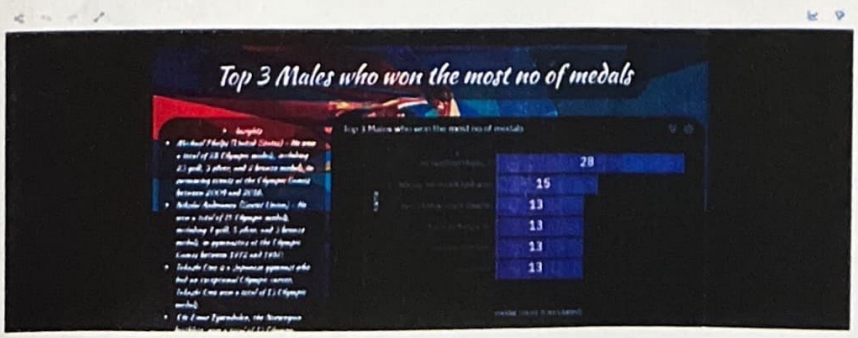


STORY



4. ADVANTAGES AND DISADVANTAGES

List Advantages and disadvantages of proposed solution.

- ADVANTAGES:-

→ Deeper insight into the performance of countries in the olympics over the years and helps athletes to quickly analyze their own and competitors performance.

→ Teams can make tactical adjustments during competitions based on real-time data and analysis, improving their chances to success.

→ Data analytics allows for comparing athletes' performance against competitors, aiding in strategic planning and identifying areas for improvement.

- DISADVANTAGES:-

→ Olympic sport data can be extensive and complex, making it challenging to extract meaningful insights without advanced analytical tools and expertise.

→ Due to former geographical or historical changes analysis may vary.

→ Real-time data in this context may be subject to change since it encompasses information upto the 2016 Rio Olympics only.

5. APPLICATIONS

The areas where this solution can be applied.

-> By using data analytics, the number of medals received by countries can be classified and can be displayed.

-> Athletes can study which age groups is best to excel in their game and is more likely to win the medal.

-> Can determine the number of games a country is participating in and participated in past years.

-> Can determine which country is best in which sport and the number of events increasing or decreasing over the years.

6. CONCLUSION

Summarising the entire work and findings.

The main objective of this study was to analyze and visualize the factors contributing to the evolution of Olympic games. This analysis can benefit countries and players to improve their performance by adapting strategies. We used exploratory Data analysis in Python, known, for its suitability in data analysis to perform this study. Our findings confirm that the Olympics have evolved significantly since 1896, with factors like winter Olympics' introduction, increased participation of countries and females, and various other factors. Additionally we observed a noticeable trend in the average age, height, and weight of players contributing to the Games' success over time. The analysis show cases the dynamic nature of the Olympic Games and the continous evolution that has shaped the global sporting event. By presenting these insights in graphical formats, we aim to offer a comprehensive understanding of the transformative journey of the Olympics throughout its history.

7.FUTURE SCOPE

Enhancements that can be made in the future.

As with any analysis, the project has its limitations, which provide valuable insights for future research. Acknowledging these limitations, we identify them as potential areas for further improvement and expansion in the future scope of this project.

-> Interactive Visualizations:- Developing interactive visualizations and dashboards would enable users to explore the data more dynamically, facilitating deeper analysis and personalized insights.

-> Advanced Machine learning Techniques:- Utilizing advanced machine learning algorithms could lead to more sophisticated predictive models, helping identify patterns and trends in athletes' performances more accurately.

-> Real-time Data Integration:- Incorporating real-time data feeds from ongoing or future Olympic events would provide up-to-date insights, enabling coaches and athletes to make immediate adjustments during competitions.