



TECH SAKSHAM

Case study Report

DATA ANALYTICS WITH POWER BI

“Global Olympics Dataset Diagnosis Using Power BI”

“Government Arts college (A), Kumbakonam”

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ABSTRACT

The modern Olympic Games or Olympics (French: Jeux olympiques) are the leading international sporting events featuring summer and winter sports competitions in which thousands of athletes from around the world participate in a variety of competitions.

The goal of the Olympic Movement is to contribute to building a peaceful and better world by educating youth through sport practiced without discrimination of any kind and in the Olympic spirit, which requires mutual understanding with a spirit of friendship, solidarity and fair play.



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CHAPTER 1

INTRODUCTION

History of Olympics

The history of the Games is incredibly rich and spans millennia. The first written evidence of the official Games dates from 776 BC, when the Greeks began measuring time in Olympiads, or the duration between each edition of the Olympic Games. The first Olympic Games were held every four years in honour of the god Zeus.

Paralympics

In 1948, [Sir Ludwig Guttman](#), determined to promote the rehabilitation of soldiers after [World War II](#), organised a multi-sport event between several hospitals to coincide with the [1948 London Olympics](#). Originally known as the [Stoke Mandeville Games](#), Guttman's event became an annual sports festival. Over the next 12 years, Guttman and others continued their efforts to use sports as an avenue to healing.



In 1960, Guttman brought 400 athletes to Rome to compete in the "Parallel Olympics", which ran in parallel with the [Summer Olympics](#) and came to be known as the first [Paralympics](#). Since then, the Paralympics have been held in every Olympic year and, starting with the [1988 Summer Games](#) in Seoul, the host city for the Olympics has also played host to the Paralympics.^{[53][c]} The [International Olympic Committee](#) (IOC) and the [International Paralympic Committee](#) (IPC) signed an agreement in 2001 which guaranteed that host cities would be contracted to manage both the Olympic and Paralympic Games.^{[55][56]} The agreement came into effect at the [2008 Summer Games](#) in Beijing, and at the [2010 Winter Games](#) in Vancouver.

Youth Games

In 2010, the Olympic Games were complemented by the Youth Games, which give athletes between the ages of 14 and 18 the chance to compete. The Youth Olympic Games were conceived by IOC president [Jacques Rogge](#) in 2001 and approved during the 119th Congress of the IOC. The [first Summer Youth Games](#) were held in Singapore from 14 to 26



August 2010, while the [inaugural Winter Games](#) were hosted in [Innsbruck](#), Austria, two years later. These Games will be shorter than the senior Games; the summer version will last twelve days, while the winter version will last nine days. The IOC allows 3,500 athletes and 875 officials to participate at the Summer Youth Games, and 970 athletes and 580 officials at the Winter Youth Games. The sports to be contested will coincide with those scheduled for the senior Games, however there will be variations on the sports including mixed NOC and mixed gender teams as well as a reduced number of disciplines and events.

21st-century Games

The Summer Olympics have grown from 241 participants representing 14 nations in 1896, to more than 11,300 competitors representing 206 nations in [2020](#). The scope and scale of the Winter Olympics is smaller; for example, [Beijing](#) hosted 2,971 athletes from 91 nations in [2022](#). Most of the athletes and officials are housed in the [Olympic Village](#) for the duration of the Games. This accommodation centre is designed to be a self-contained home for all Olympic participants, and is furnished with cafeterias, health clinics, and locations for religious expression.



Cost of the Games

The Oxford Olympics Study 2016 found that, since 1960, sports-related costs for the Summer Games were on average US\$5.2 billion and for the Winter Games \$3.1 billion. These figures do not include wider infrastructure costs like roads, urban rail, and airports, which often cost as much or more than the sports-related costs. The most expensive Summer Games were Beijing 2008 at US\$40–44 billion, and the most expensive Winter Games were Sochi 2014 at US\$51 billion. As of 2016, costs per athlete were, on average, US\$599,000 for the Summer Games and \$1.3 million for the Winter Games; for London 2012, the cost per athlete was \$1.4 million, and the figure was \$7.9 million for Sochi 2014.



Effect of television

The [1936 Summer Olympics](#) in Berlin were the first Games to be broadcast on television, though only to local audiences. The [1956 Winter Olympics](#) in Italy were the first internationally televised Olympic Games, and the broadcasting rights for the [following Winter Games](#) in California were sold for the first time to specialised television broadcasting networks—[CBS](#) paid US\$394,000 for the American rights. In the following decades, the Olympics became one of the ideological fronts of the Cold War, and the [International Olympic Committee](#) wanted to take advantage of this heightened interest via the broadcast medium. The sale of broadcast rights enabled the IOC to increase the exposure of the Olympic Games, thereby generating more interest, which in turn enhanced the appeal of TV air time to the advertisers. This cycle allowed the IOC to charge ever-increasing fees for those rights. For example, CBS paid US\$375 million for the American broadcast rights for the [1998 Nagano Games](#), while [NBC](#) spent US\$3.5 billion for the American rights to air every Olympic Games from 2000 to 2012.



Revival

Greek interest in reviving the Olympic Games began with the [Greek War of Independence](#) from the [Ottoman Empire](#) in 1821. It was first proposed by poet and newspaper editor [Panagiotis Soutsos](#) in his poem "Dialogue of the Dead", published in 1833. [Evangelos Zappas](#), a wealthy Greek-Romanian philanthropist, first wrote to [King Otto of Greece](#), in 1856, offering to fund a permanent revival of the Olympic Games. Zappas sponsored the first [Olympic Games](#) in 1859, which was held in an [Athens](#) city square. Athletes participated from Greece and the Ottoman Empire. Zappas funded the restoration of the ancient [Panathenaic Stadium](#) so that it could host all future Olympic Games.

The stadium hosted Olympics in 1870 and 1875. Thirty thousand spectators attended that Games in 1870, though no official attendance records are available for the 1875 Games. In 1890, after attending the Olympian Games of the [Wenlock Olympian Society](#), Baron [Pierre de Coubertin](#) was inspired to found the [International Olympic Committee](#) (IOC). Coubertin built on the ideas and work of Brookes and Zappas with the aim of establishing internationally rotating Olympic Games that would occur every four years. He presented these ideas during



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the first [Olympic Congress](#) of the newly created International Olympic Committee. This meeting was held from 16 to 23 June 1894, at the [University of Paris](#). On the last day of the Congress, it was decided that the first Olympic Games to come under the auspices of the IOC would take place in Athens in 1896. The IOC elected the Greek writer [Demetrius Vikelas](#) as its first president.



CHAPTER 2

SERVICES AND TOOLS REQUIRED

2.1 Services Used

- **Data Collection and Storage Services:** This project need to collect and store data in real-time. This could be achieved through services like Azure Data Factory, Azure Event Hubs, or AWS Kinesis for real-time data collection, and Azure SQL Database or AWS RDS for data storage.
- **Data Processing Services:** Services like Azure Stream Analytics or AWS Kinesis Data Analytics can be used to process the real-time data.
- **Machine Learning Services:** Azure Machine Learning or AWS SageMaker can be used to build predictive models based on historical data.

2.2 Tools and Software used



Tools:

- **PowerBI:** The main tool for this project is PowerBI, which will be used to create interactive dashboards for real-time data visualization.
- **Power Query:** This is a data connection technology that enables you to discover, connect, combine, and refine data across a wide variety of sources.

Software Requirements:

- **PowerBI Desktop:** This is a Windows application that you can use to create reports and publish them to PowerBI.
- **PowerBI Service:** This is an online SaaS (Software as a Service) service that you use to publish reports, create new dashboards, and share insights.
- **PowerBI Mobile:** This is a mobile application that you can use to access your reports and dashboards on the go.

CHAPTER 3

PROJECT ARCHITECTURE

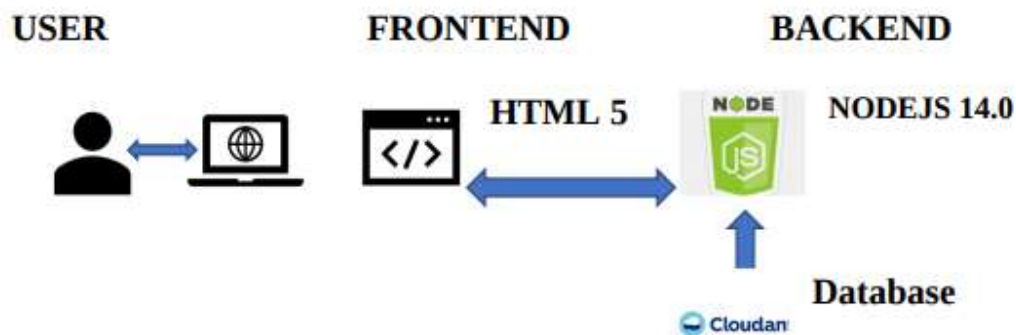


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3.1 Architecture



1. Data Collection: Real-time customer data is collected from various sources like bank transactions, customer interactions, etc. This could be achieved using services like Azure Event Hubs or AWS Kinesis.

2. Data Storage: The collected data is stored in a database for processing. Azure SQL Database or AWS RDS can be used for this purpose.



3. Data Processing: The stored data is processed in real-time using services like Azure Stream Analytics or AWS Kinesis Data Analytics.

4. Machine Learning: Predictive models are built based on processed data using Azure Machine Learning or AWS SageMaker. These models can help in predicting customer behavior, detecting fraud, etc.

5. Data Visualization: The processed data and the results from the predictive models are visualized in real-time using PowerBI. PowerBI allows you to create interactive dashboards that can provide valuable insights into the data.

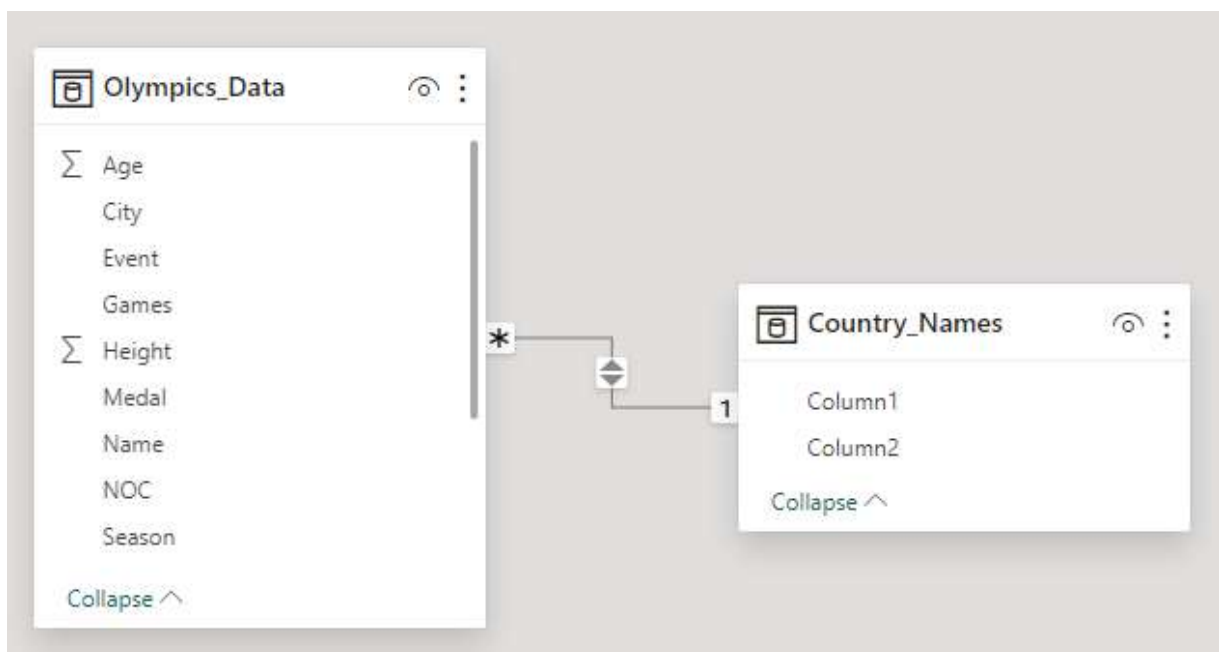
6. Data Access: The dashboards created in PowerBI can be accessed through PowerBI Desktop, PowerBI Service (online), and PowerBI Mobile.

This architecture provides a comprehensive solution for real-time analysis of bank customers. However, it's important to note that the specific architecture may vary depending on the bank's existing infrastructure, specific requirements, and budget. It's also important to ensure that all tools and services comply with relevant data privacy and security regulations.

CHAPTER 4

MODELING AND RESULT

Manage relationship



Home Help

Get data

Excel workbook

OneLake data hub

SQ data

Auto recovery contains some recovered file

Olympics_Data

Age

City

Event

Games

Height

Medal

Name

NOC

Season

Collapse

All tables

+

Edit relationship

Select tables and columns that are related.

Olympics_Data

Name	Sex	Age	Height	Weight	Team	NOC	Games	Year
Abdihakim "Abdi" Abdirahman	Male	35	178	61	United States	USA	2012 Summer	2012
Amelia Lynn "Amy" Acuff (-Harvey)	Female	37	188	66	United States	USA	2012 Summer	2012
Kyle Scott Alcorn	Male	27	185	82	United States	USA	2012 Summer	2012

Country_Names

Column1	Column2
NOC	region
AFG	Afghanistan
AHO	Curacao

Cardinality

Many to one (*:1)

Cross filter direction

Both

Make this relationship active

Assume referential integrity

Apply security filter in both directions

OK

Cancel

Share

Share

Sensitivity

Share

Sensitivity

Data

Search

Country_Names

Olympics_Data

16 | Page



Active	From: Table (Column)	To: Table (Column)
<input checked="" type="checkbox"/>	Olympics_Data (NOC)	Country_Names (Column1)

Close

Queries [2] ✕ ✓ fx = Table.TransformColumnTypes(Country_Names_Sheet,{{"Column1", type text}, {"Column2", type text}})

Country_Names
Olympics_Data

Column1	Column2
1	NOC
2	AFG
3	AHO
4	ALB
5	ALG
6	AND
7	ANG
8	ANT
9	ANZ
10	ARG
11	ARM
12	ARU
13	ASA
14	AUS
15	AUT
16	AZE
17	BAH
18	BAN
19	BAR
20	BDI

Query Settings ✕

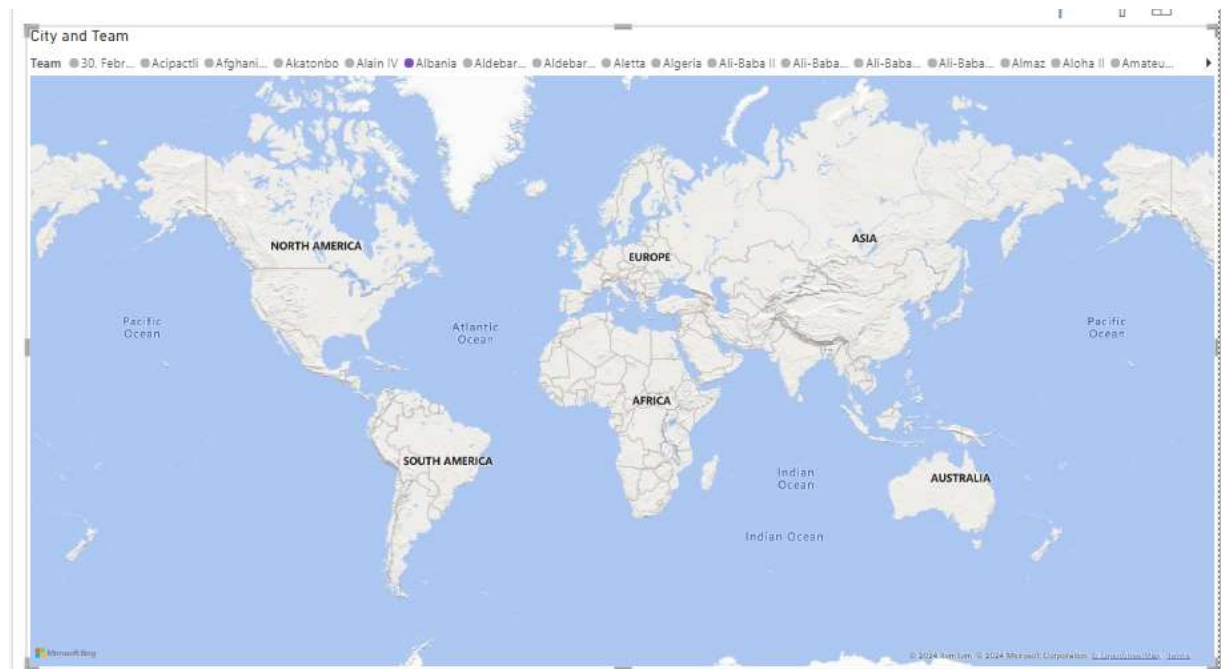
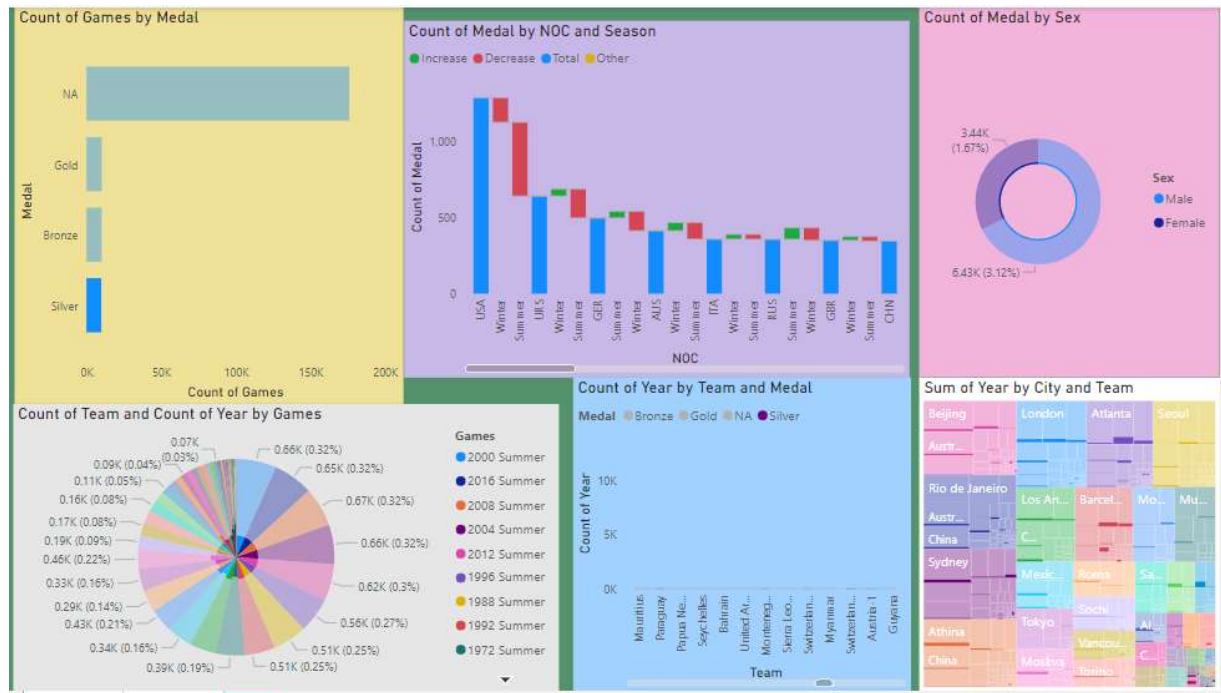
PROPERTIES

Name
Country_Names
All Properties

APPLIED STEPS

Source
Navigation
✕ Changed Type





CONCLUSION

In the modern era, the Olympic Games have expanded to include a wide range of sports in both the summer and winter seasons, attracting tens of thousands of athletes. The Olympic Games are widely regarded as the world's most prestigious sporting event, with more than 200 countries competing.

But the ancient Olympic Games ceased in 393 AD, because the roman emperor Theodosius decreed that the ancient Olympic Games were a pagan cult. The modern Olympic Games started again in 1894 and continue to this day.

The writer met a German rival who became his good friend because of the broad-mindedness of the latter. The story speaks of true friendship and true sportsmanship. The writer won four gold medals. However, he admitted that life long friendship was his greatest Olympic prize.

REFERENCES

https://en.m.wikipedia.org/wiki/Olympic_Games

LINK

