Report on IPL Dashboard Analysis Project (By Chandra Dangwal)

Introduction

This document provides an in-depth analysis of my first Excel project, an interactive dashboard analyzing the Indian Premier League (IPL) data. This project was built using various Excel functionalities such as Pivot Tables, Slicers, Charts, and other data visualization tools.
The project was completed over two different sittings, taking 2 hours. The knowledge and techniques applied in this dashboard were primarily learned from the YouTube channel **"Data Tutorials"**, which provided valuable insights into Excel functionalities.

1. Data Collection & Sources

- **Primary Data Source: Kaggle Dataset - IPL Complete Dataset 2008-2020**
- **Additional Reference: Winner List Data from Career Power**
- **YouTube Learning Resource: Data Tutorials - IPL Dashboard Guide**

2. Data Cleaning & Preprocessing

- **Raw Data Handling: The dataset consisted of IPL match statistics, which were formatted and cleaned before visualization.**
- **Sorting & Filtering: Organized data based on different match parameters such as team performance, match locations, and player statistics.**
- **Conditional Formatting: Highlighted key statistics such as match wins and Man of the Match (MOM) award winners for better readability.**

3. Pivot Tables

Pivot Tables were heavily utilized to summarize and structure the IPL data. Some major pivot tables created include:

- **Match Wins by Team: Categorized based on whether the team batted first or fielded first.**
- **Top MOM Award Winners: Displayed the top 10 players who won the most MOM awards.**
- **Title Winners Analysis: Showcased the number of IPL titles won by different teams.**
- **Toss Decision Analysis: Examined the percentage of matches won based on the decision to bat or field first.**
- **Venue-Based Performance: Compared match results at different stadiums.**

4. Pivot Charts & Data Visualization

- **Bar Charts: Used to represent team performance, MOM winners, and venue-based statistics.**
- **Pie Chart: Depicted toss decision-based winning percentages.**
- **Stacked Column Chart: Showed matches won by each team when batting or fielding first.**
- **Treemap Chart: Represented IPL title winners in a visually structured format.**

5. Slicers & Interactive Features

- **Season Selection: Allowed users to filter data by different IPL seasons.**
- **Team-wise Performance: Enabled interactive filtering of match statistics based on specific teams.**
- **Venue-Based Slicer: Provided filtering options to analyze matches based on stadiums.**

Process of Building the Dashboard

Step 1: Data Collection and Cleaning

The raw dataset was formatted properly by removing inconsistencies and ensuring structured data entry. Columns were sorted and filtered for effective processing.

Step 2: Creating Pivot Tables

Pivot tables were generated to summarize key insights such as:

- **Match wins per team (batting vs. fielding first)**
- **Player performance trends**
- **Toss decision impact**
- **Venue-based match outcomes**

Step 3: Implementing Charts and Visual Representations

- **Stacked column charts for team performance analysis.**
- **Pie chart for toss-based winning percentages.**
- **Bar charts for MOM award winners.**
- **Treemap for IPL title distribution.**

Step 4: Enhancing Interactivity with Slicers

- **Integrated slicers to filter data dynamically based on season, team, and venue.**
- **Enabled interactive data exploration without altering the original dataset.**

Step 5: Finalizing the Dashboard Layout

- **Structured the dashboard in an easy-to-read format.**
- **Ensured smooth navigation and proper data alignment.**
- **Adjusted colors and labels for better visualization.**

Significance of the Project in Data Analytics

This project serves as an excellent introduction to data analytics and visualization. Key contributions include:

1. Data-Driven Decision Making

- The dashboard provides insights into team performance trends, allowing for strategic decision-

making.
- Helps identify patterns in toss decisions, venue influence, and individual player contributions.

2. Application of Business Intelligence Concepts
- Demonstrates how raw data can be transformed into meaningful insights using Excel's analytical tools.
- Introduces best practices in dashboard design for business intelligence applications.

3. Hands-On Experience with Excel Analytics Tools
- Provides hands-on experience in working with Pivot Tables, Pivot Charts, and Slicers.
- Enhances understanding of interactive data visualization techniques.

4. Industry Relevance
- Similar dashboards are used in business analytics, sports analytics, and financial modeling.
- The project showcases the ability to handle large datasets efficiently, a crucial skill in data-driven industries.

Data Sources Used

-

Dataset - https://www.kaggle.com/datasets/patrickb1912/ipl-complete-dataset-20082020?select=matches.csv

Winner List Data: Career Power- https://www.careerpower.in/ipl-winners-list.html

YouTube Tutorial Reference: https://youtu.be/urhI3pEBEBY?si=huH-AmTv10pFoU1e

---

How This Project Contributes to Data Analytics

- Facilitates data-driven decision making in sports analytics.

- Demonstrates the power of Business Intelligence tools.

- Enhances efficiency in analyzing large datasets interactively.

- Provides structured insights into player performance and match trends.

Report on IPL Dashboard Analysis Project (By Chandra Dangwal)

Personal Experience & Learning Outcome

Completing this project was a rewarding experience as it:

- Strengthened my understanding of **data visualization, pivot tables, and Excel analytics tools**.
- Taught me how to organize and present data in an **interactive and user-friendly manner**.
- Gave me **hands-on experience** with real-world data analytics applications.

I sincerely appreciate the learning resources provided by **"Data Tutorials"** on YouTube, which helped me grasp the essential functionalities of Excel. This project has motivated me to explore more advanced analytics tools such as **Power BI, SQL, and Python for Data Analysis**.

Conclusion

This IPL dashboard analysis project is a stepping stone in my journey towards mastering data analytics. The skills and knowledge gained from this project will help me in future analytical roles, whether in business, sports analytics, or other data-driven fields.

By leveraging Excel's powerful analytical tools, I was able to create an insightful and interactive dashboard that provides meaningful insights into IPL match statistics. As I continue my Master's in Analytics, I look forward to working on more complex datasets and exploring advanced analytical techniques.

Future Improvements

- Integrate **Power BI** for enhanced interactivity and real-time data connections.
- Apply **SQL** to query and manipulate large datasets efficiently.
- Use **Python for Data Analysis** to perform deeper statistical analysis.

This project marks the beginning of my data analytics journey, and I am excited to learn and grow in this field!