**Project Summary: ATP Tournament Analysis**

**Project Overview:**

As a BI Analyst with a keen interest in sports analytics, I embarked on a personal project to analyze data from the ATP (Association of Tennis Professionals) tournaments. The objective was to create an insightful and interactive Power BI dashboard that provides an in-depth analysis of player performances, tournament statistics, and trends over time. The project aimed to showcase my skills in data modelling, DAX, and visualization, while also offering valuable insights into the world of professional tennis.

**Data Sources:**

www.kaggle.com by V.A FREEMAN

**Data Processing:**

The raw data was obtained from the publicly available sources and was cleaned and transformed using Power Query Editor in Power BI. Key steps in data preparation included:

• **Data Cleaning:** Removing duplicates, handling missing values, and standardizing player names.

• **Data Transformation:** Creating calculated columns for year, month, winner/loser ranks, and winning rate, as well as measures for win/loss ratios, average match duration, and points won.

• **Data Modelling:** Establishing relationships between tables (e.g., linking Created Calendar table and tournament data) to create a robust data model.

**Key Metrics and KPIs:**

• **Player Performance:** Analysis of win/loss ratios, sets won, and average match duration by player.

• **Tournament Insights:** Breakdown of tournament statistics by surface type (e.g., clay, hard, grass), Average Players odd, upset rate and Players Implied winning probability.

• **Ranking Trends:** Visualization of players ranking progressions over time, highlighting players with significant improvements or declines.

Dashboard Features:

• **Interactive Filters:** Users can filter the data by player, year, match rounds, series, Winners, and tournament level, allowing for customized analysis.

• **Dynamic Visualizations:** The dashboard includes a mix of line chart, bar charts, and tables, providing both high-level summaries and detailed views of the data.

Insights and Findings:

• **Surface Preference:** The analysis revealed that certain players have a strong preference for specific surfaces, with clay-court specialists like Rafael Nadal showing significantly higher win rates on clay compared to other surfaces.

• **Emerging Players:** The dashboard highlighted several emerging players who have made significant ranking jumps from 2012 - 2017 years, indicating potential future stars of the ATP tour.

• **Tournament Dominance:** The analysis of Grand Slam winners in 2012 - 2017 showcased the dominance of the "Big Three" (**Djokovic, Nadal, Murray**) in men's tennis.

**Conclusion:**

This ATP Tournament Analysis project demonstrates the power of Power BI in transforming raw sports data into actionable insights. The dashboard not only provides a comprehensive overview of ATP tournaments and player performances but also allows users to explore trends and patterns that may influence future tournaments. As a BI Analyst, this project did enhance my ability to work with complex datasets, create meaningful visualizations, and deliver insights that resonate with both casual fans and tennis enthusiasts.

**Next Steps:**

• Expand Data Coverage: Incorporate WTA (Women's Tennis Association) data to provide a broader analysis of professional tennis.

• Predictive Analytics: Implement machine learning models to predict match outcomes based on historical performance data.

• User Feedback: Gather feedback from users to refine the dashboard and add new features or insights that are most valuable to them.

**This project showcases my capability to handle end-to-end BI processes, from data extraction and transformation to visualization and insight generation, using Power BI as the primary tool.**