

Olympics Analysis Project

Data-Driven Insights into Olympic History

Project Overview

- Built an interactive Streamlit web app for Olympics analysis
- Used historical Olympics datasets for insights
- Structured code with preprocessing & helper modules

Datasets Used

- *athlete_events.csv*: Athlete details, events, and medals
- *noc_regions.csv*: Mapping of NOCs to country regions
- Preprocessed and merged to create final dataset

Data Preprocessing

- Filtered Summer Olympics only
- Merged with NOC region dataset
- Dropped duplicates and one-hot encoded medals

Key Functionalities

- Medal Tally (Year & Country-wise)
- Overall Analysis (Editions, Sports, Athletes)
- Country-wise Analysis (Trends, Heatmaps, Top Athletes)
- Interactive dashboards with Streamlit

Medal Tally Module

- Fetches medal count for selected year/country
- Provides overall tallies or detailed breakdowns
- Helps compare countries' performance

Overall Analysis Module

- **Statistics: Editions, Nations, Sports, Athletes**
- **Trends over time (Nations, Events, Athletes)**
- **Heatmap of events across sports**
- **Most successful athletes identified**

Country-wise Analysis Module

- Year-wise medal tally for a selected country
- Heatmap of sports excellence per nation
- Top 10 athletes of each country

Insights Gained

- Growth in nations, athletes, and events participation
- Top-performing countries across Olympics editions
- Most successful athletes in different sports
- Country-specific performance trends

Conclusion & Future Scope

- **Delivered an interactive Olympics analysis platform**
- **Demonstrated preprocessing, aggregation, visualization**
- **Useful for historical sports performance analysis**
- **Future: Add Winter Olympics data, predictive analytics**

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Thank you