

Exploring Olympic Trends through Data Visualization

By Team: **Totally Forgot**

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AGENDA



Project Pitch

What Do we Visualize
Audience



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Motivation
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Data Description



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Limitations

PROJECT PITCH: VISUALIZATION AND AUDIENCE

Our visualization project, titled "A Data Sprint through 120 years of Olympic History," presents a comprehensive exploration of key metrics spanning the entirety of Olympic history.

It encompasses vital statistics such as the total number of Olympic Games held, the cumulative count of unique participants, and the dynamic trends in Olympic participation over successive years.

This visualization caters to a diverse audience, including Olympic enthusiasts eager to delve into the rich tapestry of Olympic heritage, as well as researchers specializing in the nuanced analysis of Olympic trends, with a particular emphasis on gender studies.



PROJECT DESCRIPTION

Motivation

The primary aim of our project is to utilize data visualization to highlight achievements by both countries and athletes.

This entails tracking medal counts over the years to determine each nation's prowess in various sports.

Additionally, for audiences interested in gender studies, we can also analyze and present gender distributions within these achievements.

Tool is designed for...

Our tool caters to individuals keen on exploring Olympic data.

It is accessible to all athletes, coaches, sports analysts, journalists, and avid followers of the Olympic Games.

It is user-friendly and highly interactive, enabling users to explore historical patterns, medal tallies, athlete achievements, and demographic insights with ease.

RESEARCH QUESTIONS

Our project enables comprehensive analysis across diverse research questions, such as:

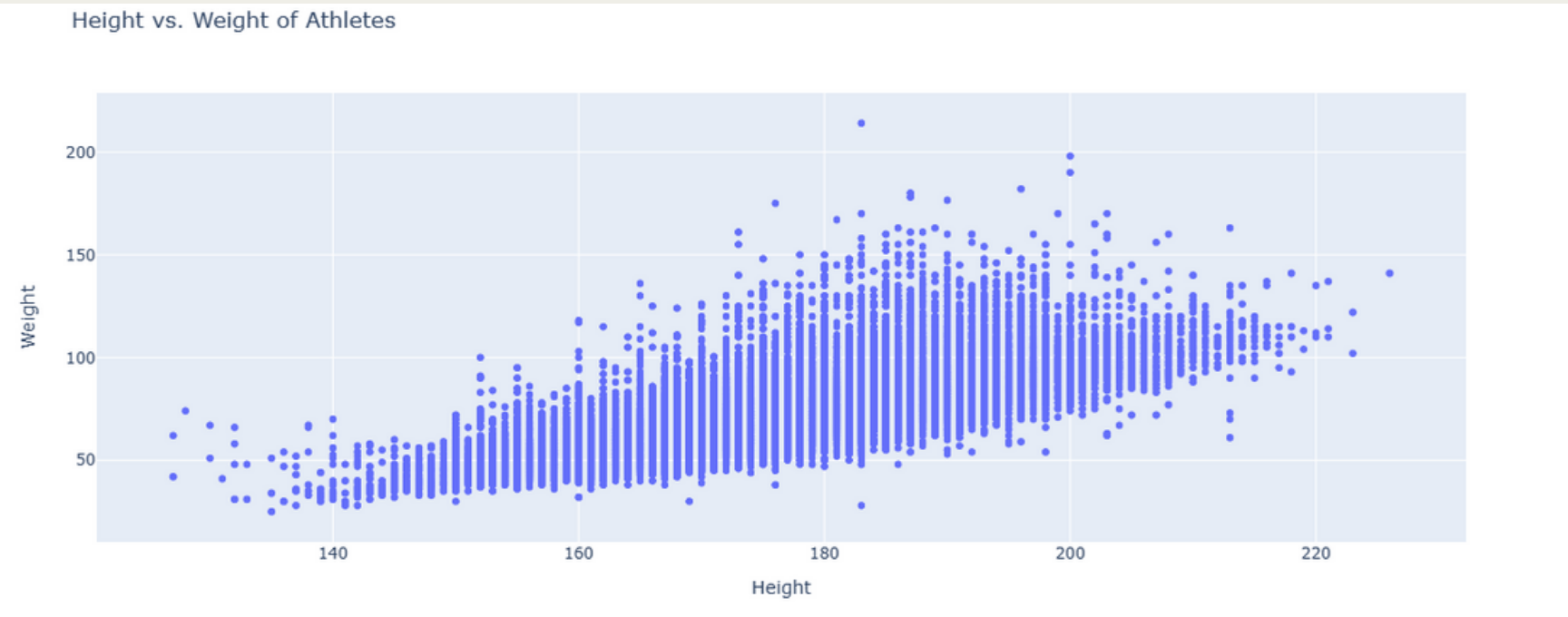
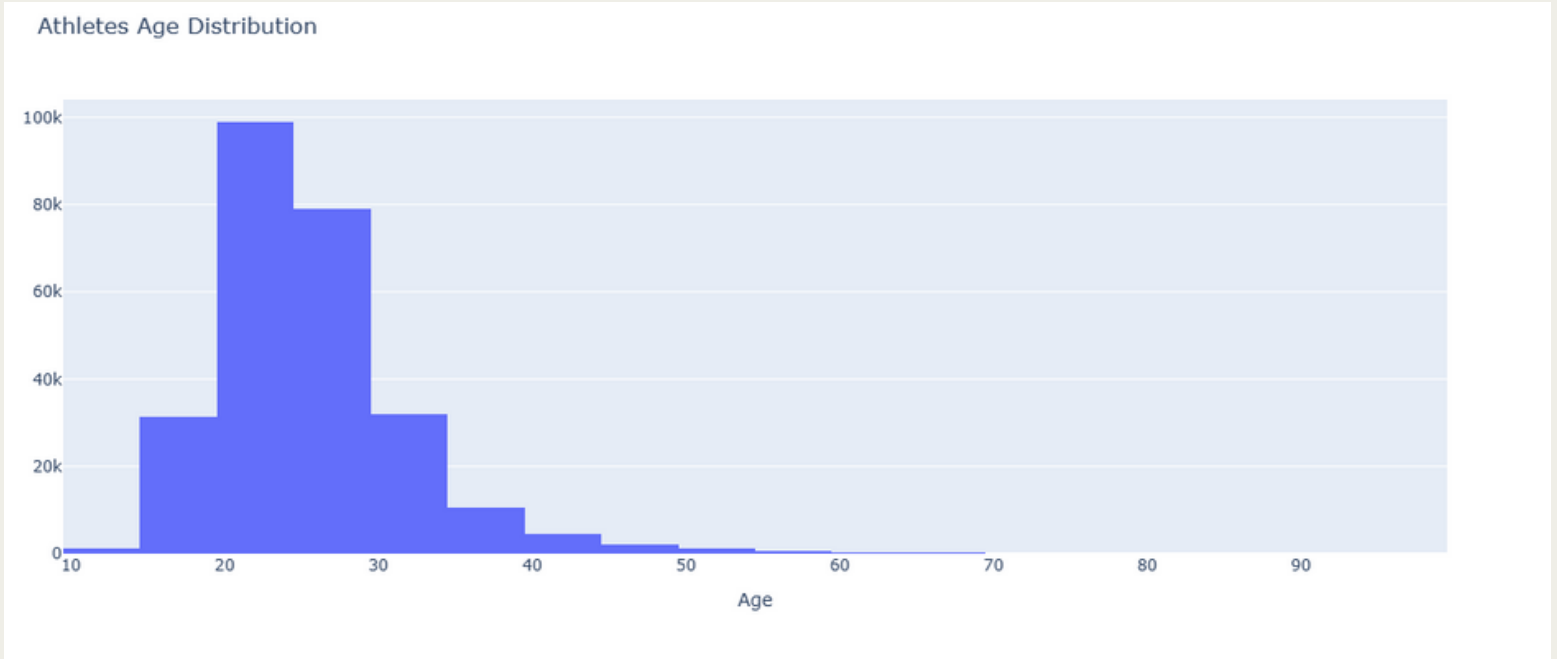
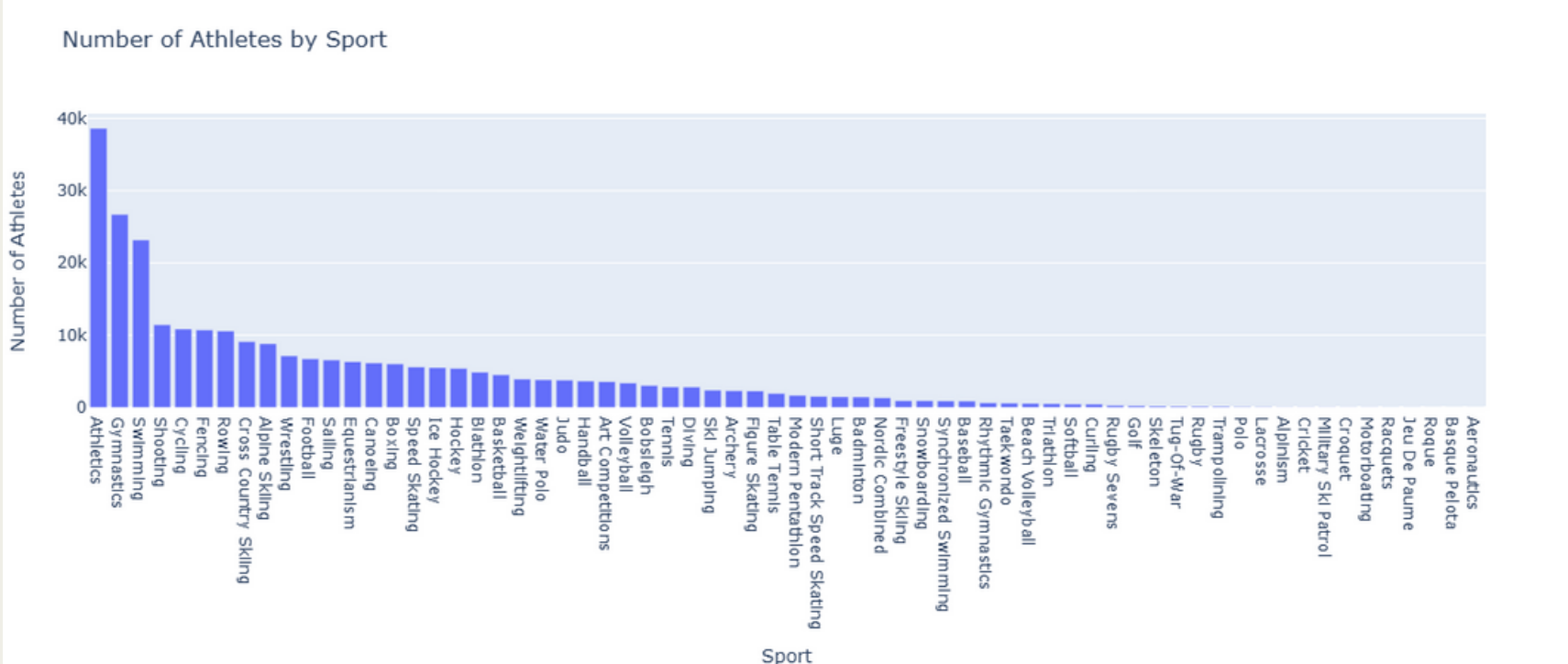


- Trend Analysis
- Seasonal Comparison
- Gender Representation
- Country Performance
- Medal Distribution
- Impact of Host Countries
- Long Term Analysis



DATA DESCRIPTION

Our dataset comprises Olympic participation information for athletes across different events and years and contains relevant athlete profile details such as gender, nationality, age, weight, height as well as medal achievements. The dataset has been derived from [Kaggle](#).



PROJECT DEMO: TOOL EXPLANATION

The tool shows interactive visualizations of Olympic data and provides insights into various aspects of the Olympic Games over time.



Total Number of Olympic Games: observe trends in the frequency of Olympic events.



Gender Distribution: analyze gender representation across different time periods.



Summer vs. Winter Games: provide insights into numbers of participants and distribution of medals between these 2 events.



Country-wise Participation: which countries have historically been the most active in terms of the number of participants and medal counts.



Participation Timeline: track changes in number of participants and identify significant trends that may have influenced Olympic participation.

PROJECT DEMO: ENCODINGS



Pie charts

Used to visualize the distribution of gender & the comparison between summer and winter games. The proportions are a good choice to compare the relative contributions of different categories.



Bar charts

Offer an intuitive way to represent categorical data and make comparison between different categories. Delivers valuable insights into Olympic history, participation trend, performance metric, & the evolution of the Olympic Games.



Line charts

Illustrate trends over time, such as the participation timeline. They are well-suited for showing changes and trends over months and years, so that users can identify patterns and fluctuations in Olympic participation over time.

PROJECT DEMO: INTERACTIONS

- **Filtering:** Users can filter all the charts using a single set of global filters for Time Period, Season, Gender, Country, Sport, Medal
- **Hover Interactivity:** Users can hover over data points on the participation timeline graph to view detailed information such as the year and the number of participants for that year
- **Legend Interaction:** Users can interact with the legend of the participation timeline graph to show or hide specific categories
- **Chart Connectivity:** The Top 10 Athletes view is connected to the Athlete Profile view using hover functionality over the bars representing individual athletes



PROJECT DEMO: INTERACTIONS

b00809881.pythonanywhere.com

Exploring the Pinnacle of Sports History Through Data

Welcome to our interactive exploration of over a century of Olympic triumphs, challenges, and global participation. This dashboard presents an unprecedented data-driven journey through the chronicles of the Olympic Games, showcasing the tales of athletes and nations as they compete on the world's foremost stage of sport.

Insights at a Glance:

Uncover trends in Total Number of Unique Participants, reflecting the expanding inclusivity and reach of the games over time.

Explore the Gender Distribution in the Olympics, a mirror to the broader societal shifts towards gender equality in sports.

Engage with the Olympic Participation Over the Years, noting the ebb and flow of global engagement in this international event.

Celebrate the Top 10 Athletes, whose extraordinary feats have left indelible marks on history and view a detailed Selected Athlete Profile, encompassing their Olympic journey from debut to final accolades.

Total Number of Olympic Games

51

Summer vs Winter Games



Total Number of Unique Participants

135571

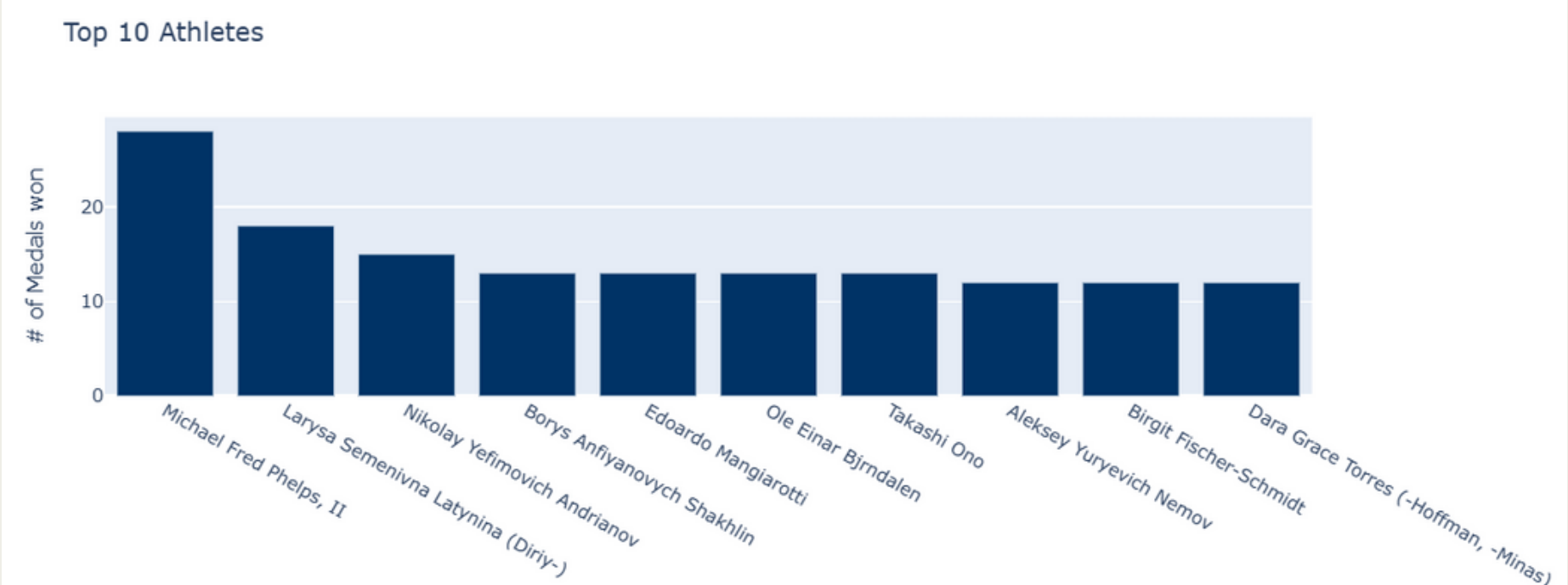
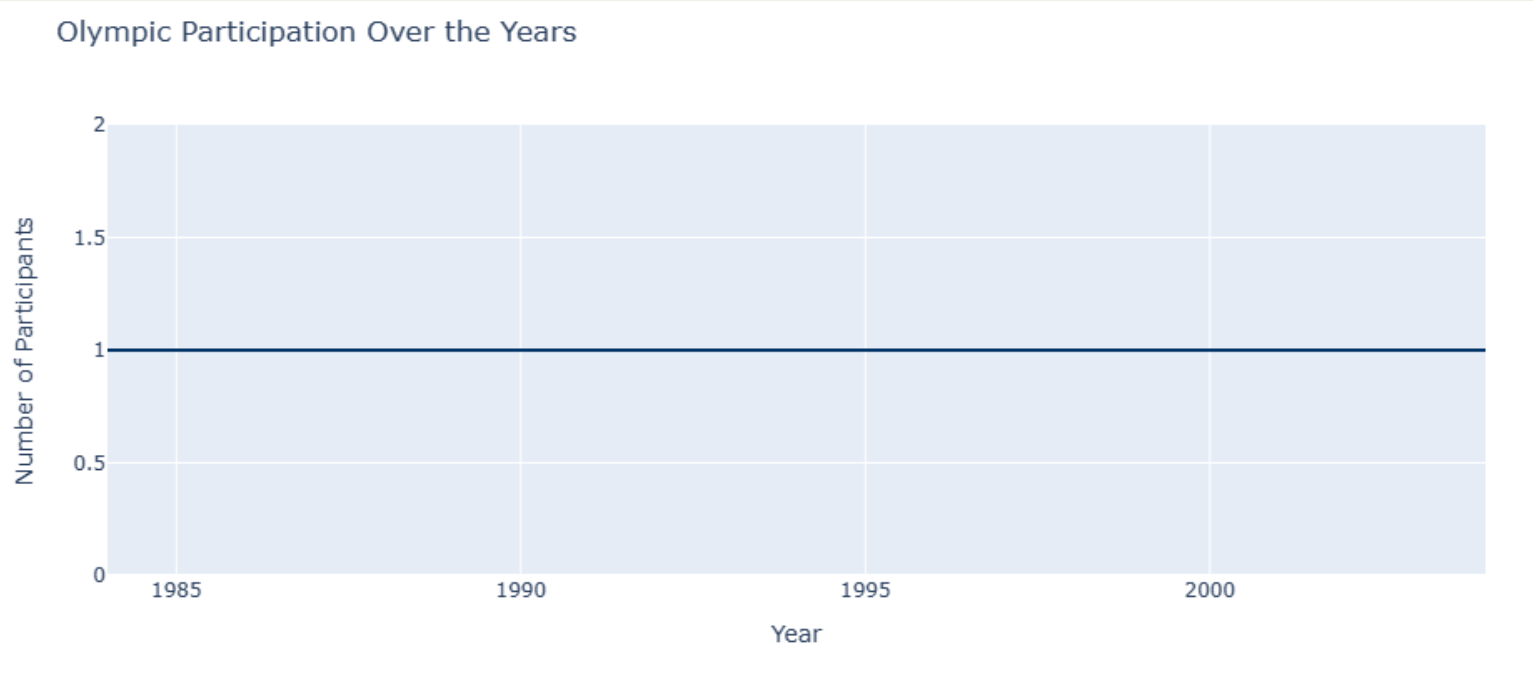
Gender Distribution



PROJECT DEMO: FINDINGS

In many developing nations, there is a lack of recorded gold medal achievements by women. For example, in Morocco, there is a consistent pattern where men secure one gold medal in each summer Olympic Games, compared to none in the women’s division.

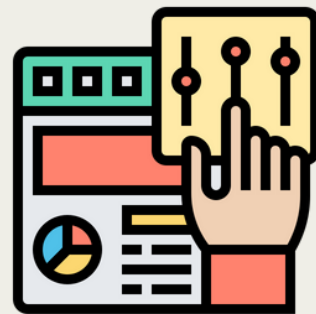
Gymnastics stands out as the predominant sport among the all-time top 10 athletes, holding a significant portion of the medal record. Moreover, the majority of these elite athletes originate from developed countries.



TOOL LIMITATIONS

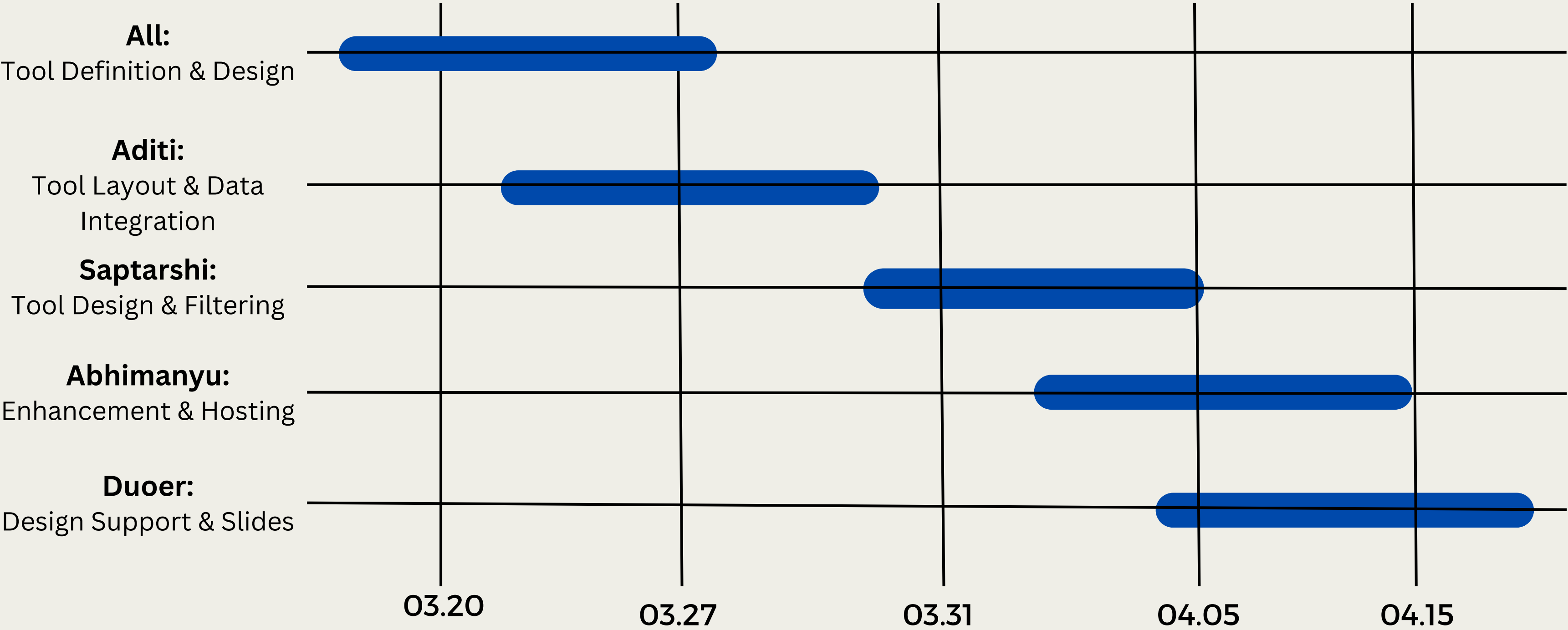


- **Limited Insights:** While the dashboard data includes athlete demographics, team information, and event details, it does not encompass other potential dimensions such as athlete performance metrics, injury records and audience engagement metrics. Integrating such dimensions could offer a more comprehensive understanding of Olympic trends and patterns.



- **Static Visuals:** The dashboard provides static visual representations derived from preset filters and parameters. It lacks dynamic functionalities such as real-time data updates, and predictive modeling capabilities, which could offer enhanced insights into Olympic trends and patterns.

WORK DISTRIBUTION



Thank you!

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