



COM-480 - Data Visualization Milestone 2

École Polytechnique Fédérale de Lausanne (EPFL)

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Medalytics, a data-driven exploration of the Olympic Games

1 Visualizations

1.1 World map

Showcase the countries most represented in the Olympic Games by the number of athletes and their corresponding number of medals won, allowing users to explore information by clicking on individual countries.

We will use D3.js to create a dynamic and interactive world map, enhanced with juxtaposed views to show comparisons or highlight country-specific data on selection. Course: Maps (8.1)

1.2 Gender chart

Visualize gender distribution over years.

We will implement a simple gender distribution chart using Recharts. This is not a difficult implementation, but we found it interesting to make use of the statistics about athletes' sex. Course: Tabular data (11.1)

1.3 Sortable athletes ranking

Allow users to explore and rank athletes based on customizable criteria, providing a sortable and interactive list.

The core of this visualization will use a faceted search approach, based on the navigational search feature from previous projects. This will allow for dynamic filtering and sorting. Course: Interactions (5.1)

1.4 Medals bar chart race

Dynamically show the progression of country medal counts over time in a race-style animation, highlighting growth and change.

We will use Recharts and draw technical guidance from one of the previous projects (Formula 1), which included animated temporal transitions in chart components. Course: Tabular data (11.1)

1.5 Sports treemap

Highlight emerging or newly introduced Olympic sports through a hierarchical treemap that conveys proportional representation.

We will use D3.js to build an interactive treemap, allowing users to explore categories and subcategories of sports with smooth transitions and tooltip support. Course: Interactions (5.1)

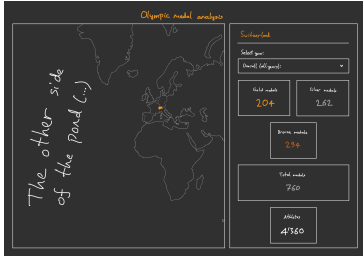


Figure 1: World map

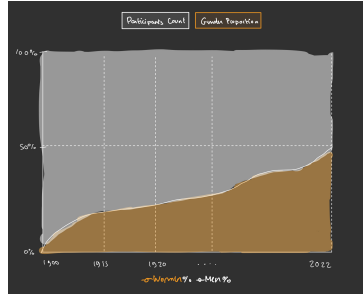


Figure 2: Gender chart 1/2

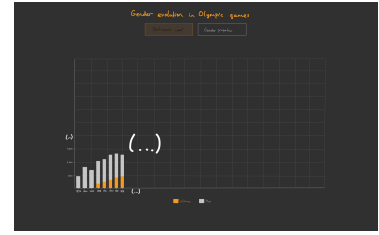


Figure 3: Gender chart 2/2

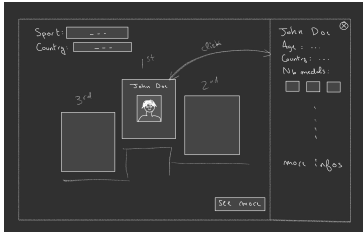


Figure 4: Sortable ranking

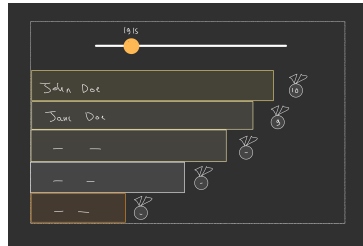


Figure 5: Bar chart race

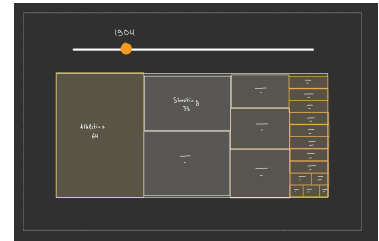


Figure 6: Sports treemap

2 Website and Extra ideas

- **Website Logo and Name:** *Medalytics* is a combination of the words *medals* and *analytics*, reflecting the site's purpose: analyzing Olympic medal data. The logo incorporates a stylized "M" inspired by the Olympic rings, giving the website a thematic and recognizable identity.
- **Color Palette and Dark/Light Mode:** The design is built around a medal-inspired color scheme:
 - Gold: #D4A142
 - Silver: #C0C0C0
 - Bronze: #B77E44
 These colors are used consistently across the interface in charts, highlights, and UI components. The website also supports a dark mode for improved readability and accessibility.
- **Typography and Iconography:** The site uses the *SF Pro* font for a clean and modern look that enhances readability. Icons are used sparingly to improve usability without introducing visual noise.
- **Navigation Style:** The website adopts a *scrollytelling* or *slide-based storytelling* approach, where each section or component is displayed as a full-screen page. This linear storytelling layout guides the user through the data in a structured and immersive manner.
- **Animations Between Visualizations:** Transitions between sections and visualizations are enhanced with smooth animations to provide visual continuity, draw attention to changes, and improve the overall user experience.

Additional ideas:

- **Athlete Highlight Carousel:** only for the very best athletes, where we can show pictures (Olympic athlete ID is in the dataset) and additional facts (height, weight, city of origin...)

- Timeline of Olympic Events: again with pictures, can also be represented as a map, with results of the host country athletes the year of the event
- Olympic Quiz: we can ask some basic questions that can be answered by looking at previous visualizations, like an MCQ