

Data Visualization Report

Spring '25

Project 1 Phase 1

Team 10
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1 [Click here to view the project](#)

2 Introduction

The Great Knaresborough Bed Race is an annual event in North Yorkshire, combining athleticism and creativity. Teams push decorated beds through a 2.4-mile course featuring steep hills, water crossings, and rough terrains. The race has been held for over 60 years, making it an essential cultural and sporting tradition.

This report analyzes 21 years of race data, covering race results, team participation, and performance trends using interactive visualizations.

3 Visualizations & Insights

3.1 Speed Chronicles: Tracking the Fastest Beds (Line Chart)

Question: How have winning teams' performance times evolved over the past two decades?

Visualization: Line Chart (See Figure 1)

Views:

- **Time View:** Analyzes the top 3 teams (Gold, Silver, Bronze) over the years, along with the yearly average.
- **Team View:** Tracks the performance trends of selected top teams over multiple years.

Functionalities:

- Zoom using two-finger gestures.
- In Team View, users can select teams to analyze.
- In Time View, users can filter between 1st, 2nd, 3rd place, or the yearly average.

Insights:

1. Harrogate Harriers dominated from 2003 to 2015, after which GH Brooks Men took over, winning multiple times in recent years.
2. The fastest recorded time was 12 minutes, 51 seconds (2014 - Harrogate Harriers), and the slowest was 14 minutes, 24 seconds (2011 - Harrogate Harriers).
3. Ripon Runners consistently placed 2nd or 3rd but rarely won.
4. The impact of missing race years (2020–2021) led to a strong resurgence of GH Brooks Men post-pandemic.



Figure 1: Speed Chronicles - Line Chart

3.2 Bed Race Spectrum: Evolution of Participation (Stacked Bar Chart & Streamgraph)

Question: How has participation changed over the years across different categories?

Visualization: Stacked Bar Chart & Streamgraph (See Figure 2)

Functionalities:



Figure 2: Speed Chronicles - Line Chart

- Displays total participants and category distribution.
- No category data before 2015.
- Percentage analysis included.
- Streamgraph for clearer trend visualization.

Insights:

- Participation has increased over time, with a steady rise in mixed and female teams.
- Male teams dominate, but category balance is improving.
- The streamgraph helps visualize long-term trends more clearly than the stacked bar chart.

3.3 Category Clash: Analysis of Performance Times (Heatmap)

Question: What are the differences in performance trends across race categories?

Visualization: Heatmap (See Figure 3)

Functionalities:

- Displays category-wise performance for 2015–2024.
- On hover, shows best, worst, and average times.

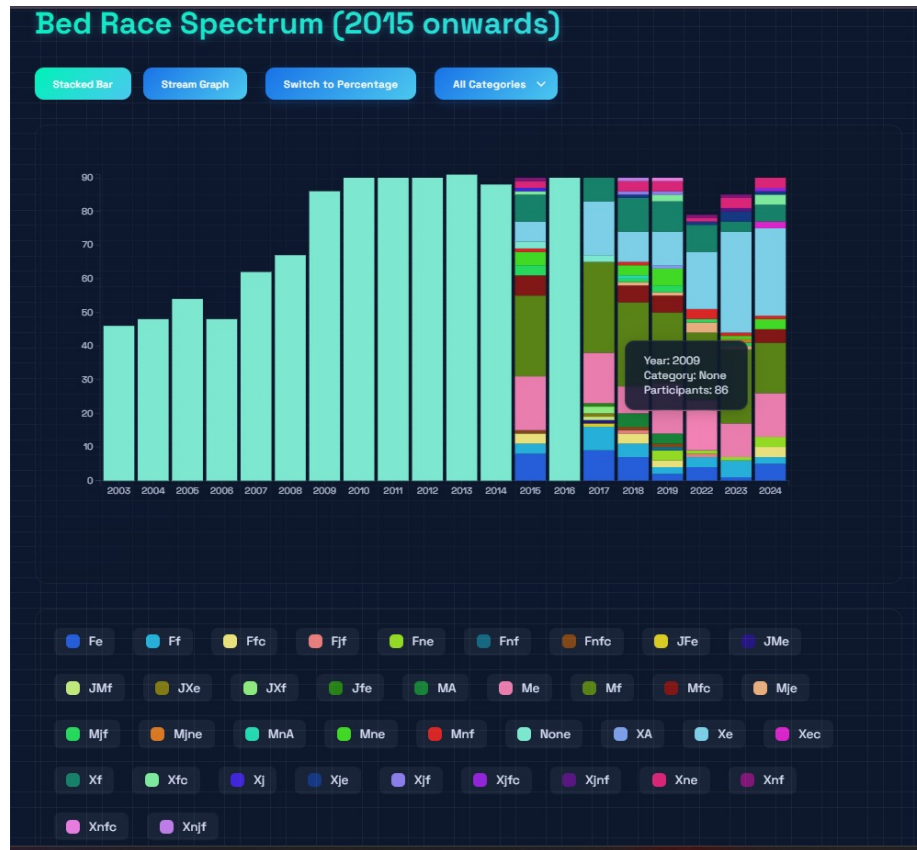


Figure 3: Bed Race Spectrum - Stacked Bar Chart & Streamgraph

- Indicates whether performance improved or declined compared to the previous year.
- Color intensity varies based on average race times.

Insights:

- Male teams consistently perform the fastest, followed by mixed and female teams.
- Performance gaps between categories have decreased over time.
- Certain years show anomalies where unexpected categories outperformed others.

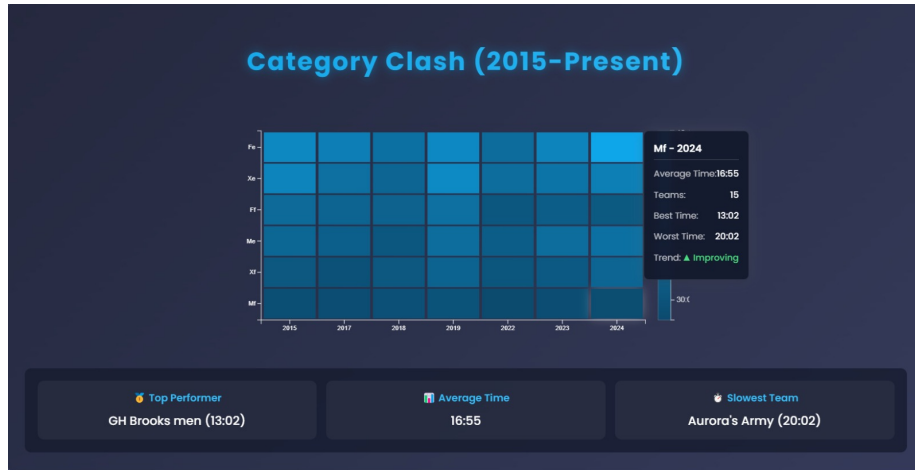


Figure 4: Category Clash - Heatmap

4 Inference Analysis

In addition to visualizing race data, we derived key inferences from our analysis. These insights help to understand deeper trends and patterns that may not be immediately visible in the visualizations.

4.1 RACE ANALYTICS INFERENCES

4.1.1 The Second Place Saga

Key Insight: Teams caught in the "Second Place Curse" – a mysterious pattern where history repeats itself!

4.1.2 Cinderella Stories

Key Insight: Identifying teams that made unexpected jumps in performance.

4.1.3 Lucky Bed Chronicles

Key Insight: Exploring teams that got unusually favorable race conditions.

4.1.4 Victory Margin Evolution

Key Insight: The epic tale of closing gaps and nail-biting finishes!

5 Individual Contributions

| Team Member | Contribution |
|-----------------|------------------------------------------------------------------|
| Ayush Sheta | Speed Chronicles (Visualization 2.1), Deployment, INFERENCE page |
| Soham Sadavarte | Category Clash (Visualization 2.3) |
| Tathya Vaghasia | Bed Race Spectrum (Visualization 2.2), Dashboard |

Table 1: Team Contributions

6 Conclusion

This report presents a data-driven analysis of the Great Knaresborough Bed Race through interactive visualizations. The insights derived provide a deeper understanding of performance trends, participation patterns, and category-based analysis. Our visualizations effectively communicate the historical evolution and significance of this event.

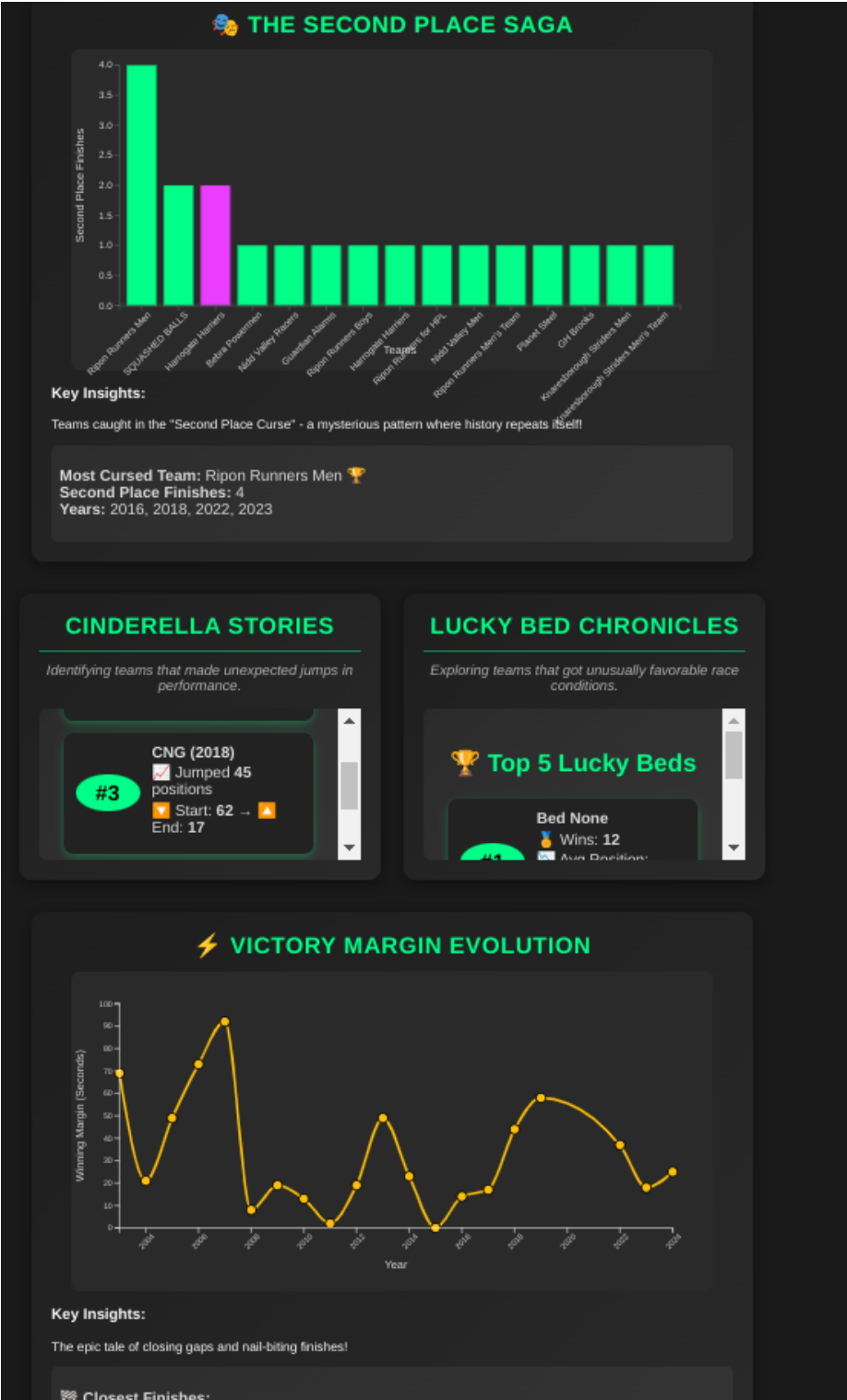


Figure 5: Key Inferences from Race Analytics