

The background features a large, semi-transparent watermark of the American Ninja Warrior logo, which is a shield-shaped emblem with the words "AMERICAN NINJA WARRIOR" and stars.

American Ninja Warrior

Most Popular Obstacles per Course
Order

Executive Summary

- Television Executives for the hit TV show American Ninja Warrior want an analysis of what their most popular obstacles were in each order step of the course.
 - There were 10 total seasons of data
 - There are also 10 order steps in every course
 - There are numerous rounds and locations of every season, each having a different course layout

Case Study Information

In this case study, I was able to determine which obstacles were the most commonly used in each of the 10 steps of a course, from the data spanning over 10 seasons worth. There were also 225 unique obstacles used throughout the 10 seasons.

Cleaning The Data

I first cleaned the data using Google Sheets using conditional formatting and pivot tables to ensure all data was entered and accounted for, and was in a similar format.

I then created a master table which was imported into BigQuery where I used SQL to determine which obstacles showed up the most in each round, and sorted by round

After this, I exported the new table created in SQL to Google Sheets and was able to create my final dataset

Cleaning the Data Using SQL

The screenshot displays the Google Cloud BigQuery interface. At the top, the Google Cloud logo and 'My Project 59861' are visible. A search bar contains the text 'Search Products, resources, docs (/)'. Below this, a 'SANDBOX' banner indicates the user is in a sandbox environment.

The left sidebar shows the 'Explorer' panel with a search bar and a list of pinned projects. The project 'dynamic-style-356918' is expanded, showing several datasets: 'american_ninja_warrior', 'obstacle_by_ordernum', 'obstacle_by_season' (selected), 'obstacle_name_num', 'avocado_data', 'babynames', 'cars', 'customer_data', 'employee_data', 'upload_test_dataset', and 'warehouse_orders'. The 'bigquery-public-data' project is also listed at the bottom.

The main panel shows a SQL query editor with the following query:

```
1 SELECT *, COUNT(Obstacle_Name) AS total_by_name
2
3 FROM american_ninja_warrior.obstacle_name_num
4
5 GROUP BY Obstacle_Name, Obstacle_Order
6
7 ORDER BY Obstacle_Order DESC
```

Below the query editor, the 'Query results' section is displayed. It includes a 'SAVE RESULTS' button and a table with the following data:

Row	Obstacle_Name	Obstacle_Or...	total_by_na...
1	Cargo Climb	10	2
2	Spider Trap	10	6
3	Spider Climb	10	9
4	Elevator Climb	10	6
5	Invisible Ladder	10	11

At the bottom right, the 'Results per page' is set to 50, and the page number is 1 of 50.

	A	B
1	Obstacle_Order	MOST UNIQUE PER ORDER
3	1	32
4	2	20
5	3	10
6	4	16
7	5	7
8	6	82
9	7	38
10	8	6
11	9	10
12	10	11
13	Grand Total	82
14		
15		

Obstacle_Name	Obstacle_Order	total_by_name
Quintuple Steps	1	32
Log Grip	2	20
Bridge of Blades	3	10
Jump Hang	4	16
Jumping Bars	5	7
Warped Wall	6	82
Salmon Ladder	7	38
Flying Bar	8	6
Rope Ladder	9	10
Invisible Ladder	10	11

Confirmed my data using a pivot table to ensure the numbers match up on my final data table

Most Popular 'American Ninja Warrior' Obstacles

Obstacle Order	Obstacle Name	Total By Name
1	Quintuple Steps	32
2	Log Grip	20
3	Bridge of Blades	10
4	Jump Hang	16
5	Jumping Bars	7
6	Warped Wall	82
7	Salmon Ladder	38
8	Flying Bar	6
9	Rope Ladder	10
10	Invisible Ladder	11

Sum of Total By Name broken down by Obstacle Order and Obstacle Name. Color shows sum of Total By Name. The marks are labeled by sum of Total By Name.

Conclusion

In conclusion, after analyzing the data from all 10 seasons of American Ninja Warrior, I was able to determine which obstacle was the most popular in each order of the course.

I also determined that the Warped Wall is the obstacle that showed up the most unique times, and the Flying Bar appeared the least unique times.

I have determined that this would be the most popular order in creating an optimal course based off of the most popular unique times each obstacle appeared at each specific order of the course.