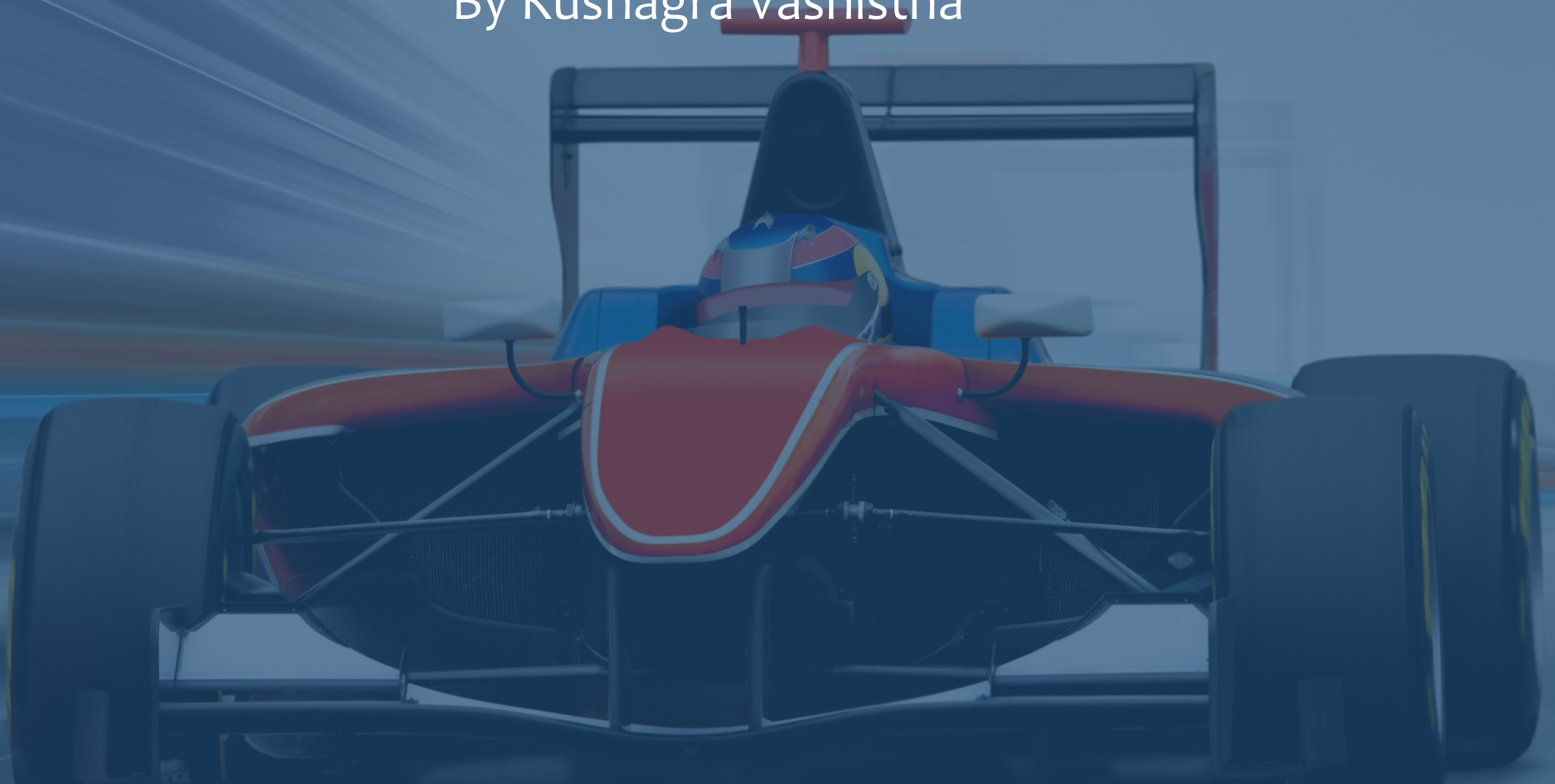


F1 Data Analysis

By Kushagra Vashistha



Research Question

"How has the performance and dominance of Formula 1 teams evolved over the years, and what insights can be gained from analyzing their championship standings from 1958 to 2020?"

A Formula 1 car is shown from a front-three-quarter perspective, moving rapidly on a track. The car is primarily red and blue, with a driver visible in the cockpit. The background is blurred to convey speed. A vertical dotted line with three circular markers passes through the center of the car, with the top marker aligned with the title 'Audience'.

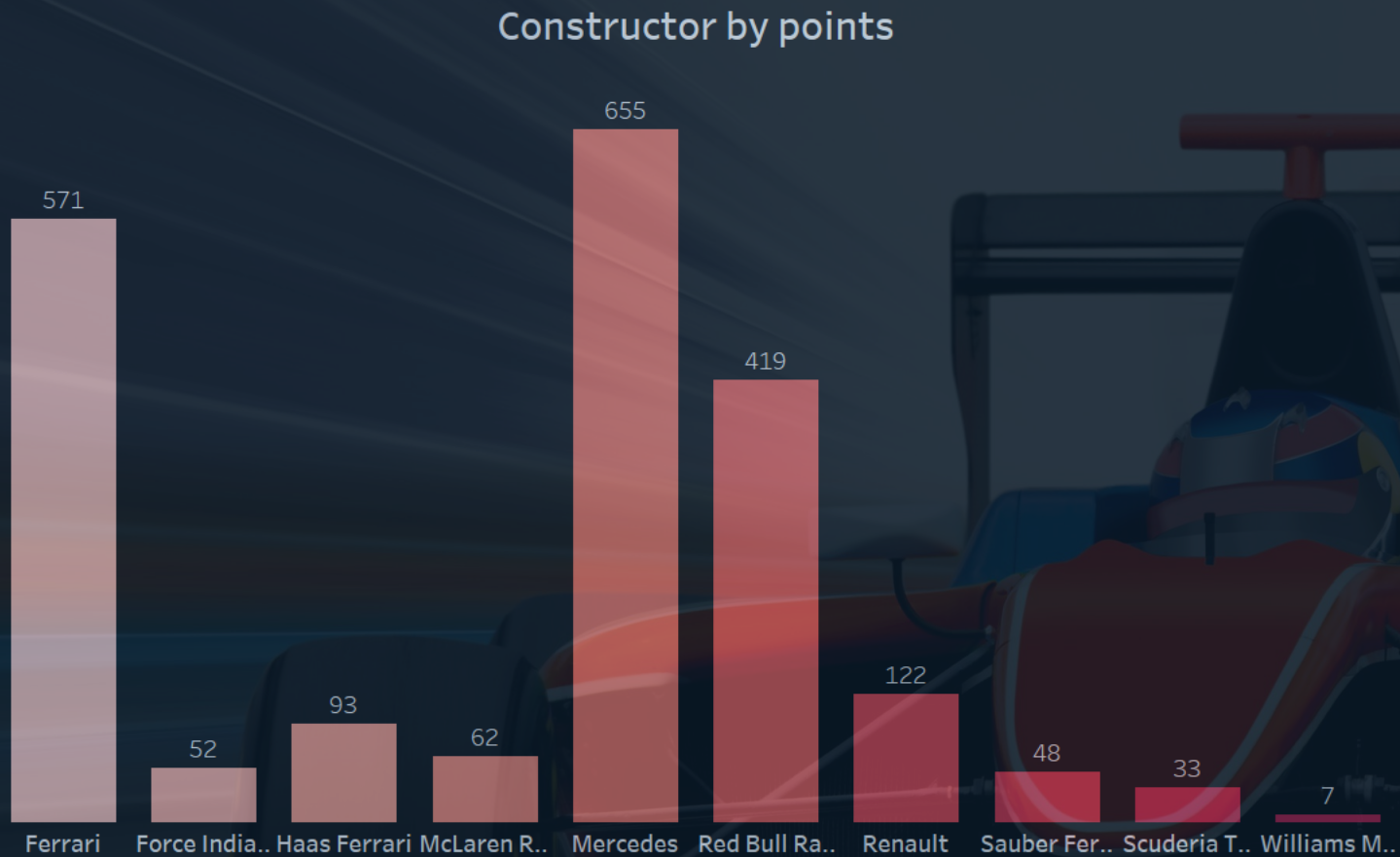
Audience

This visualization aims to serve Formula 1 enthusiasts, data enthusiasts, and sports fans interested in understanding the historical trends and patterns of team performance in the Formula 1 World Championship.

Description

In this visualization, we delve into the rich history of Formula 1 by examining the championship standings of teams over the span of 1950 to 2023. The visualization provides an interactive and user-friendly interface, allowing users to explore the dominance of different teams, track their performance over time, and identify key milestones in Formula 1 history. Even for those unfamiliar with data analysis, the visualization offers an intuitive way to grasp the evolution of team standings and the changing landscape of Formula 1.

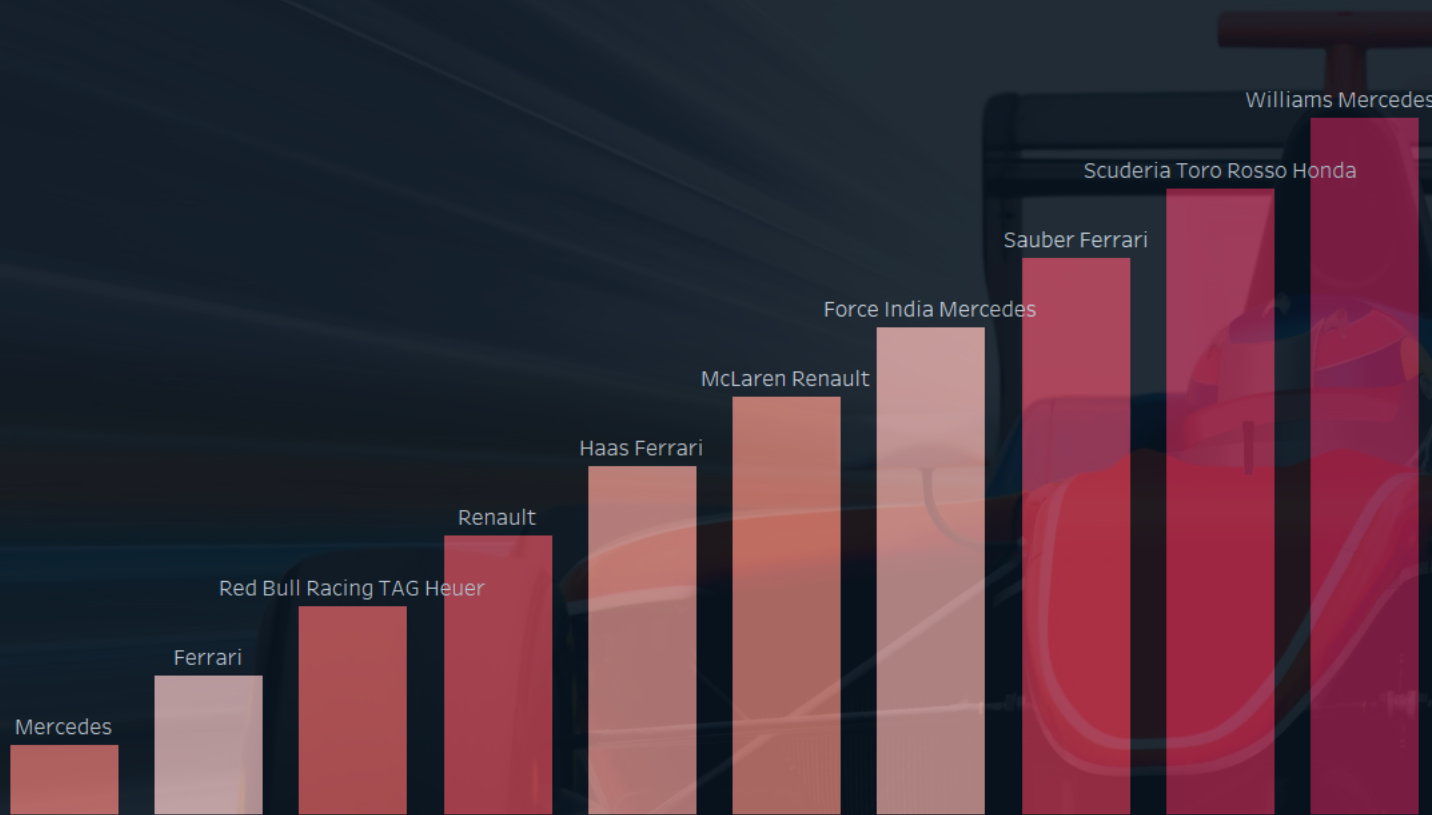
Constructor By Point



- Mercedes, with a towering bar reaching 655 points, demonstrates their financial muscle and competitive edge, overshadowing the rest of the pack, with Ferrari trailing at 571 points, despite their illustrious history and reputation.
- As the graph reveals, while giants like Mercedes and Ferrari lead the charge with their staggering spending, smaller teams like Williams Mercedes grapple at the bottom with a modest 7 points, painting a vivid picture of the financial disparities that coexist within the sport's elite echelons.

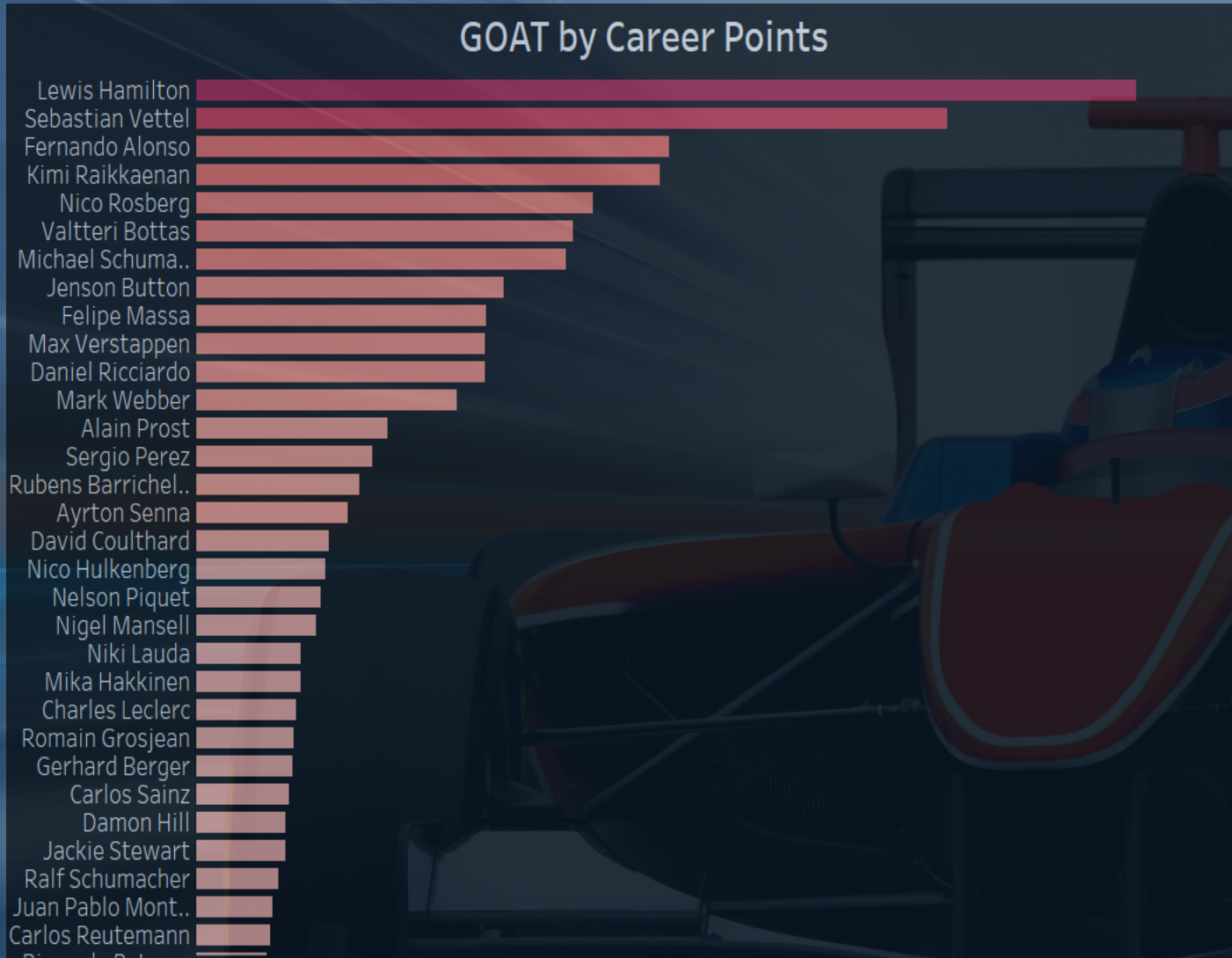
Constructor By Points

Constructors Rank by position



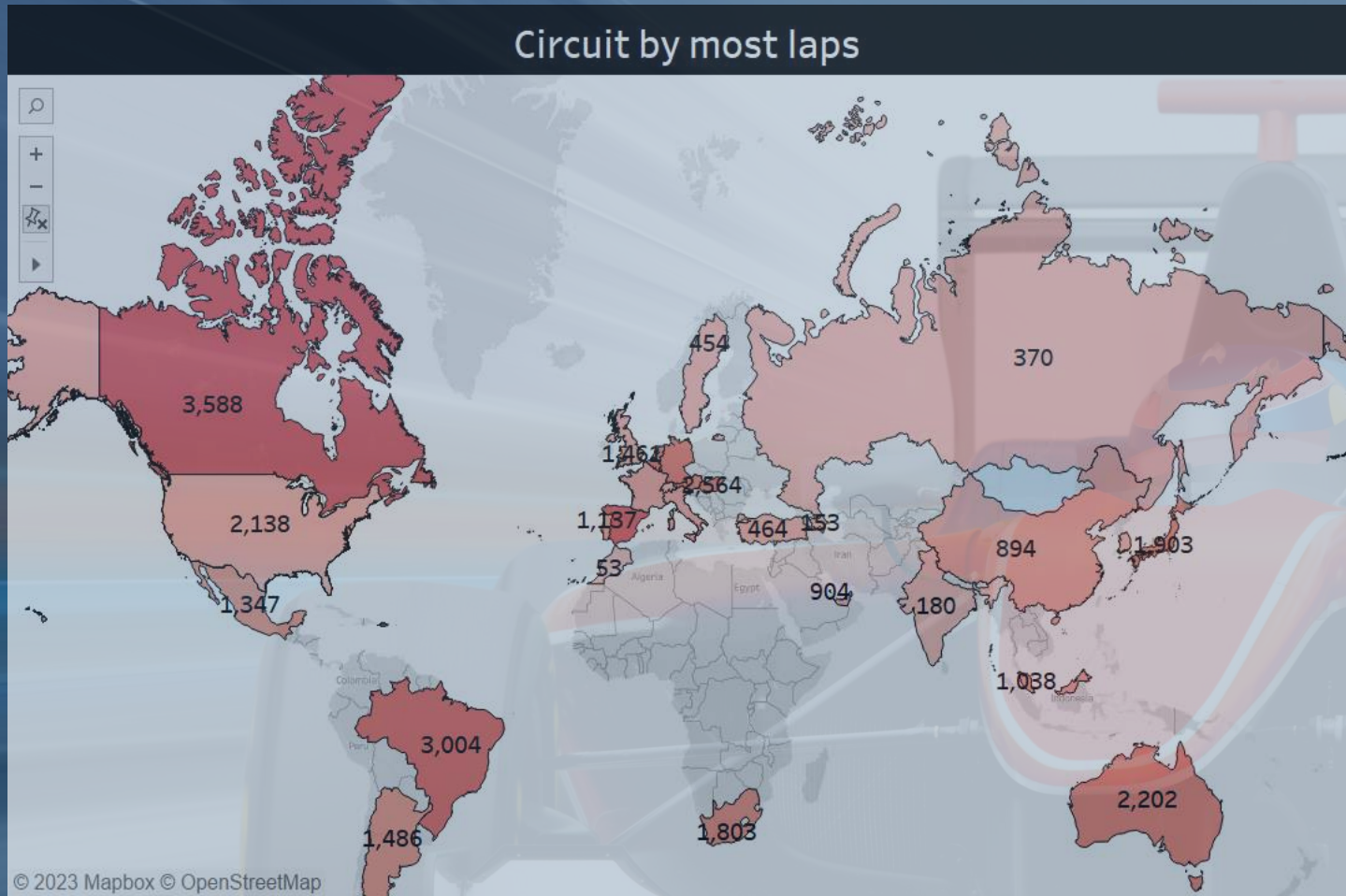
The "Constructors Rank by Position" chart unfolds the tale of competitive zeal in the Formula 1 arena, where the giants of the track are ranked not just by speed but by strategic brilliance and points accumulated. Mercedes leads the pack, standing tall as the colossus of the grid, while the likes of Williams Mercedes and Scuderia Toro Rosso Honda follow, reflecting the perpetual chase in the world of high-speed racing.

GOAT by Career Points



"GOAT by Career Points" showcases a pantheon of racing legends, with Lewis Hamilton and Sebastian Vettel leading the vanguard, their bars stretching far across the chart, a testament to their dominance in the high-stakes ballet of Formula 1 racing.

Circuit By Most Laps



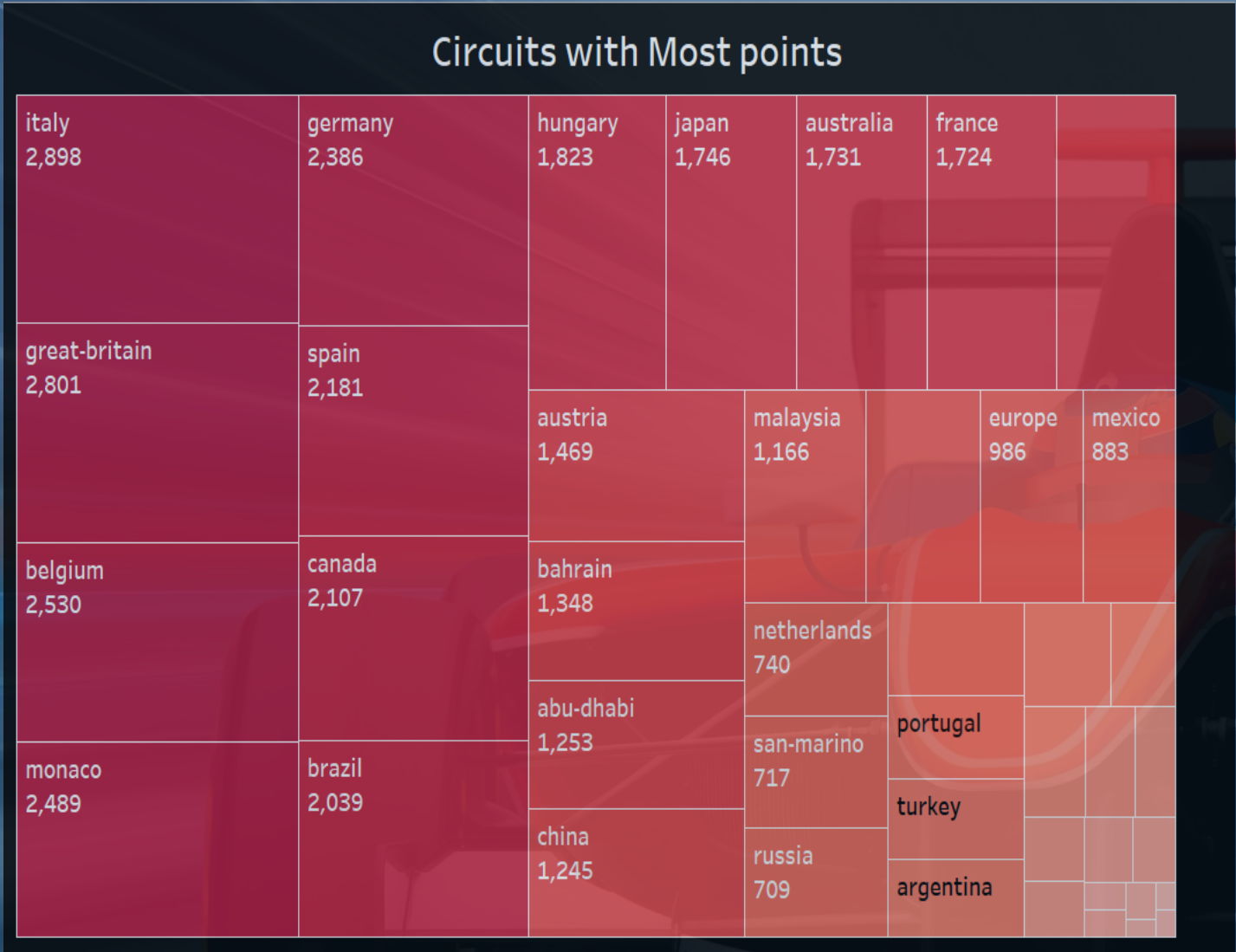
Notable are the epicenters of racing fervor: North America, with a staggering 3,588 laps in Canada, the enthusiastic 2,202 in Australia, and Europe's heart in Germany beating with 1,564 laps, each digit marking the rhythm of countless battles fought on the asphalt stage

Drivers By Nationality & Their Team

Drivers by Nationality & their Teams		
Alan Brown	Cooper Bristol	2
Allan McNish	Toyota	0
Anthony Davidson	Super Aguri Honda	0
Bob Anderson	Lola Climax	0
	Brabham Climax	8
Brian Redman	BRM	4
	Cooper BRM	4
Chris Irwin	BRM	2
Cliff Allison	Lotus Climax	3
	Ferrari	8
Damon Hill	Williams Renault	326
	Arrows Yamaha	7
	Jordan Mugen Honda	27
David Coulthard	Williams Renault	63
	RBR Cosworth	24
	RBR Ferrari	14
	Red Bull Renault	22
	McLaren Mercedes	412
David Prophet	Brabham Ford	0
Dennis Poore	Connaught Lea Francis	3
Derek Bell	Surtees Ford	1
Derek Warwick	Arrows Ford	7
	Lotus Lamborghini	3
	Toleman Hart	9
	Footwork Mugen Honda	4

The visualization shows a list of Formula 1 drivers with their respective teams and points, highlighting David Coulthard's stellar 412 points with McLaren Mercedes and Damon Hill's notable 326 points with Williams Renault.

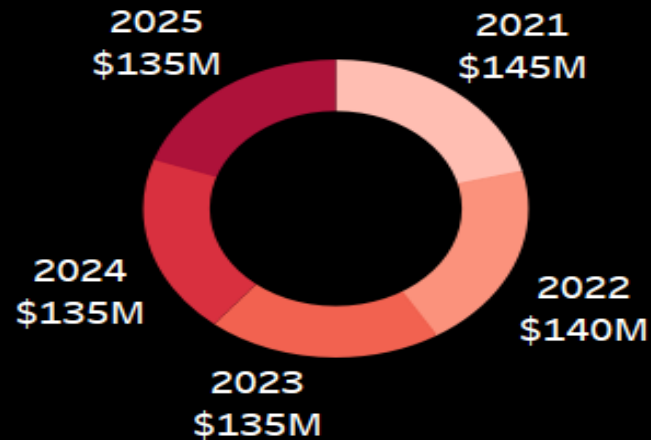
Circuit With Most Points



The "Circuits with Most Points" chart displays a heat map of Formula 1 circuits, where the deeper shades of red reflect higher points scored, with Italy's circuit leading at 2,898 points.

Budget Cap Per Year

Budget Cap per Year



The image is a donut chart depicting the Formula 1 budget cap for each year, starting at \$145 million in 2021 and tapering down to \$135 million by 2023, which remains constant through 2025.

Categories Viz. Spending Floor

Categories viz. Spending Floor & Ceiling



The chart "Categories viz. Spending Floor & Ceiling" illustrates the minimum and maximum spending of Formula 1 teams on various categories, with the greatest expenditure shown on engine and rear wings, reaching up to \$65,000K.

Average Spending By Teams in 2023



Teams like McLaren and Mercedes have higher spending spikes, suggesting strategic investments, possibly around the start of the racing season or during critical development periods.

Links to dashboard

1. https://public.tableau.com/views/Introduction_17012329088750/Dashboard1?:language=en-US&:display_count=n&:origin=viz_share_link
2. https://public.tableau.com/views/Constructors_17012329405980/Constructor?:language=en-US&:display_count=n&:origin=viz_share_link
3. https://public.tableau.com/views/Drivers_17012329732490/Driver?:language=en-US&:display_count=n&:origin=viz_share_link
4. https://public.tableau.com/views/Circuit_17012330050900/Circuit?:language=en-US&:display_count=n&:origin=viz_share_link
5. https://public.tableau.com/views/Finances_17012330373330/Finances?:language=en-US&:display_count=n&:origin=viz_share_link



THANK YOU