MSQ12

From Track to Trends: Formula 1 Racing Over Time Through Exploratory Data Analysis and Visualization

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Abstract

This paper explores the growing global phenomenon of Formula 1 (F1) racing by analyzing a comprehensive dataset from 1950 to 2024. The dataset covers various aspects of F1, including race results, driver statistics, and constructor standings. Applying Exploratory Data Analysis (EDA) and visualization techniques, this study uncovers patterns and insights, such as trends in races per season, consistently top-performing drivers and constructors, the impact of shorter pit stops on team performance, and the relationship between higher grid positions and increased chances of winning. The findings contribute to a deeper understanding of F1 dynamics and provide a foundation for future predictive analyses.

Conference Track

Management Science and Quantitative Methods