UFC Fight Analysis (2010–2024) — Project Summary

Project Overview

This project explores patterns in UFC fight outcomes from 2010 to 2024, focusing on how weight class, reach, stance, and geography influence the way fights end. The analysis was conducted using Python for data preparation and Tableau for visual storytelling.

The aim was to uncover trends in KO/TKO, Submission, and Decision finishes and understand how physical attributes and match conditions contribute to these outcomes.

Research Questions

- How do finish types (KO/TKO, Submission, Decision) vary across weight classes?
- Does a reach advantage correlate with striking effectiveness?
- Do stance matchups (e.g. Southpaw vs Orthodox) influence KO likelihood?
- How have finish type trends evolved over time?
- Does event geography affect the rate of finishes (e.g. KO%)?

Methodology

- Data Source: Kaggle UFC dataset (2010–2024), cleaned and structured for analysis
- Tools: Python (Jupyter Notebooks, pandas, matplotlib), Tableau
- Key Techniques: Exploratory data analysis, chi-square testing, geographic and temporal trend analysis

Key Findings

- Decisions dominate modern UFC, especially in lighter divisions
- KO/TKOs are more frequent in heavier divisions and in Southpaw vs Orthodox matchups
- Reach advantage (especially >5cm) correlates with a higher strike differential
- KO rates vary by country, potentially influenced by cultural styles or judging
- Submissions have declined while Decisions have steadily increased over time

Limitations

- Dataset covers only fights from 2010 onward, excluding early UFC eras and the pre-USADA period
- Fighter nationality was unavailable; geographic analysis is based on fight location only
- Some features (e.g., stance, reach) were inferred or missing
- Pre-fight betting odds are static snapshots — not updated for live movement or injury adjustments
- Fight-level stats were not used for modeling; this is a descriptive analysis

Deliverables

- Tableau Storyboard
- GitHub Repository

👤 Author Info

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