

UFC Fight Analysis (2010-2024) — Project Summary

Project Overview

This project delves into over a decade of UFC fight data, aiming to uncover patterns and insights that define the dynamics of mixed martial arts competitions. By analysing fight outcomes, fighter attributes, and event locations, we strive to understand the factors that influence victory in the octagon.

Key Research Questions

- Finish Types Across Weight Classes: How do knockout, submission, and decision rates vary among different weight divisions?
- Impact of Physical Attributes: Does a reach advantage correlate with higher striking success?
- Stance Matchups: Do certain fighting stances (e.g., Southpaw vs. Orthodox) lead to higher knockout probabilities?
- Temporal Trends: How have fight outcomes evolved from 2010 to 2024?
- Geographical Influence: Does the location of the event affect the likelihood of a fight ending in a finish?

Tools & Technologies

- Data Source: [Ultimate UFC Dataset by mdabbert on Kaggle](#)
- Programming Language: Python (pandas, matplotlib)
- Visualization: Tableau
- Statistical Analysis: Chi-square tests, exploratory data analysis

Key Findings

- KO/TKO finishes are more common in heavier divisions, while lighter weights tend to go to decision.
- Fighters with a reach advantage >5cm showed a statistically higher strike differential.
- Stance mismatches (Southpaw vs Orthodox) were associated with increased KO likelihood.
- Submissions have declined over time, while decisions have increased steadily.

Geographic location seems to influence finish rates — with KO% varying by country.

Limitations

- The dataset starts at **2010**, so earlier UFC eras were not analyzed.
- **Fighter nationality** is missing – country analysis is based only on fight location.
- Some stats were **inferred** or missing, especially stance/reach in older events.
- Betting odds are **static pre-fight figures** – live shifts or injury updates not captured.
- No predictive models were trained – this is a **descriptive, exploratory** project.

Deliverables

[Tableau Storyboard](#)

[Github Repository](#)



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