

# NFL 4th Down Decision-Making Model

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This project analyzes NFL play-by-play data to evaluate 4th down decision-making. Using logistic regression and visualization tools, it explores which field positions and distances offer the highest probability of converting 4th downs. The model can help coaches make more informed, data-driven decisions during critical moments in a game.

Technologies used include Python, pandas, sklearn, seaborn, and matplotlib. Visual outputs include a heatmap of go-for-it success by field position and a logistic model for recommendation.