**Abstract**

Sports betting has grown into a multi-billion-dollar industry, yet predicting game outcomes remains a challenging task. This research analyzes historical National Football League (NFL) data, incorporating game-by-game variables and money-line betting odds since 2003. Using PageRank and logistical regression, we assess the effectiveness of different predictive models and attempt to develop profitable models of betting strategies. This research highlights the intuition and development of single variable logistical regression models and PageRank, while providing visualizations to further develop understanding of logistical regression and their performance in profitability over time.