

Syracuse University

Football Analytics

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Defeating the Two-High: Strategic Offensive Adaptations in Modern NFL Defense

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Introduction

Over the past decade, the NFL has experienced notable shifts in offensive strategies. While the mid-to-late 2010s were characterized by high-volume passing attacks, passing rates have declined in recent seasons. A primary driver of this trend is a change in defensive strategy, with teams increasingly employing two-high safety coverages. According to [NextGenStats](#), the percentage of passing attempts against two-high safety looks rose from 44% in 2019 to 63% in 2024.

In response, offenses have emphasized the running game and focused on short- and intermediate-range passes to counteract these defensive schemes. [Research by Tej Seth](#) indicates that the correlation between expected points added per pass (EPA/Pass) and average intended air yards has weakened considerably, shifting from a strong relationship in 2015–2020 to nearly no correlation in 2022–2025. Whereas the deep pass was once considered essential for quarterback success, offenses have increasingly adapted to neutralize the impact of the two-high safety look.

Your objective is to analyze how defenses deploy two-high safety coverage, understand the factors driving its prevalence, and develop strategic offensive countermeasures to exploit this defensive scheme.

Key Areas of Analysis

Part 1: Understanding Two-High Safety Coverage Deployment and League Trends

Your analysis should begin by establishing a comprehensive understanding of when and why defenses employ two-high safety coverage. Investigate the situational factors that influence this defensive decision, including down and distance, field position, time remaining in the game, score differential, and opponent offensive tendencies. Additionally, consider how player quality and defensive capabilities impact the frequency of two-high looks across the league.

Conduct a league-wide analysis based on 2025 data to identify which teams employ two-high safety coverage most frequently and which teams are least frequent in its usage. Additionally, assess which teams are most effective at executing two-high safety coverage and which teams are least effective.

Part 2: Offensive Attack Strategies Against Two-High Coverage

Approach this section as an analytics problem focused on identifying optimal offensive strategies through data analysis. Develop an understanding of how offenses can effectively attack two-high safety coverage through formation selection and route design, and what defenses might do to counter those choices. Your analysis should identify play types, formations, and route concepts that exploit the two-high look while remaining disguised to prevent defensive audibles. It is critical that the offensive formations you identify will not cause the defense to audible out of the two-high coverage, such as power formations or other heavy personnel groupings that signal run-heavy intent.

To not be exploited yourself, examine the strategic importance of mixed offensive strategies. Analyze how offenses must balance their play-calling between run and pass plays, short and intermediate throws, and various route concepts to maintain unpredictability and prevent defensive adjustments. The best strategy will prevent the defense from predicting offensive intent while maximizing the effectiveness of your attack concepts.

Analyze the most effective passing and run-game approaches that work within these constraints,

examining which play types and route concepts generate the most success when this coverage scheme is likely. Evaluate how the integration of multiple counter-strategies creates a more effective overall offensive approach than relying solely on one attack method.

Part 3: Situational Game Planning and Specific Play Design

Approach this section as a coaching problem focused on translating analytical findings into practical, executable game plans. Use the Minnesota Vikings (a two-high heavy defense) for your defensive team and select one of the Kansas City Chiefs, Buffalo Bills, or New England Patriots for your offensive team. Using the analytical conclusions from Part 2, develop how the offensive team's coaching staff would adjust their game plan when facing this specific two-high heavy defense compared to a defense that rarely employs this look. (Assume all teams are fully healthy)

From a coaching perspective, address the following: How would play-calling tendencies change? Which personnel groupings would the coaching staff emphasize? What strategic emphases would shift in preparation for this particular opponent?

Design a concrete pass play to attack the most common defensive personnel grouping used by the Vikings when employing two-high safety coverage on a first-and-10 play from the offense's own 35-yard line. Include specific route concepts for all eligible receivers (wide receivers and tight ends) and explain the coaching rationale for why each route is placed where it is and what defensive weakness it exploits. This play should represent a practical coaching solution that implements the optimal strategies identified in your analytics.

Your deliverable from this section should be a coaching game plan and specific play design that demonstrate how an offensive coaching staff would operationalize your analytical findings in actual game situations.

Data

The dataset provided by Sports Info Solutions contains all the necessary information to address the requirements of this prompt. However, you are welcome to supplement your analysis with data from any **publicly available** source, provided it is not protected by a paywall. Note that the use of subscription-based data services is strictly prohibited. Be sure to properly acknowledge any external sources used in your presentation, as failure to do so may result in penalties during judging. Additionally, the raw data provided for the competition **MUST NOT BE SHARED OR PUBLISHED** on any public platform and is strictly for competition purposes. All raw data **MUST** be deleted following the conclusion of the competition. However, you are permitted to share or publish your code and presentation materials.

The datasets included are entitled “2026_FAB_play_by_play” and “2026_FAB_data_dictionary.” The data dictionary gives a description of all the variables in the play by play dataset.

Case Requirements

In your evaluation of two-high safety coverage and offensive adaptations, your analysis should address the following key areas:

- **Coverage Deployment and League Trends:** What situational factors most significantly impact a team's decision to employ two-high safety coverage? Which teams rely on this coverage most heavily, and which teams employ it least frequently? Which teams are the most and least effective?
- **Offensive Attack Strategies:** Identify and evaluate how offenses can effectively attack two-high safety coverage through formation and route design while maintaining disguise. Which formations and play types generate the most success against this coverage?
- **Comparative Game Planning:** For your selected matchup, how does the offensive game plan change when facing a high-frequency two-high defense compared to a defense that rarely employs this look? What adjustments in personnel, play-calling, and execution are necessary?
- **Play Design and Tactical Execution:** Present a detailed pass play design that effectively attacks the defensive personnel grouping most commonly used alongside two-high safety coverage. Explain the strategic purpose of each route and how the play exploits defensive weaknesses.

You will deliver a final presentation summarizing your analysis and recommendations directly to football industry professionals. Ensure your findings are primarily data-driven and supported by concrete evidence to substantiate your conclusions.

Judges will evaluate your work based on the following criteria:

Overall Process

- Clear and concise presentation that demonstrates thorough understanding of two-high safety coverage and its strategic implications
- The depth and sophistication of statistical tools and methods used to derive results
- Methodological soundness in your approach and analysis
- The strength, validity, and reasonableness of your conclusions and recommendations

Creativity

- Incorporation of personal insights and creative elements beyond the basic requirements outlined in the case
- Novel approaches to analyzing coverage tendencies and offensive counter-strategies

Clarity and Communication

- Effective organization and succinctness in your presentation, ensuring your analysis is easy to follow
- The ability to convincingly communicate results in a way that impacts decision-making
- Use of strong visualizations to support your findings and enhance your presentation
- Dynamic and engaging delivery by presenters

It is important to understand that judges are highly knowledgeable about football and are well-acquainted with the strategic questions outlined in the prompt. Therefore, teams should tailor their presentations to avoid including excessive or irrelevant background information that may detract from the time available to present their analysis. The total time allotted for each

presentation is 25 minutes, which includes 20 minutes for the presentation itself and 5 minutes for a Q&A session with the judges.

This competition is designed exclusively for undergraduate students to compete against other undergraduate students. Therefore, teams are strictly prohibited from seeking assistance from faculty, family, friends, or any students not officially registered on their team. Additionally, teams must not contact anyone affiliated with an NFL team or any other individual for advice related to this case.

Teams are permitted to use the internet as a resource to help answer the case questions and develop their analyses. However, presentations should incorporate original insights and personal interpretations. While related analyses and materials may be available online, an over-reliance on external work will weaken the overall quality and impact of your presentation. Be sure to properly acknowledge any external sources used in your analysis.

Each team must submit their final presentation to footballanalyticsblitz@gmail.com by 8:00 PM EST on Thursday February 12th at the latest. Late submissions will be penalized during the judging process.

If you have any questions about this case, please feel free to contact Austin Ambler at aambler@syr.edu.