Overall Summary:

Position Group	Opportunity (Snaps) Model Fit	Production Model Fit	Transfer Effect Summary
DB	Poor	Poor	Transfers receive fewer snaps, but similar or better efficiency
DL	Poor	Moderate	Transfers receive fewer snaps; efficiency similar once playing
WR / TE	Poor	Strong	Transfers show higher per-snap production
RB / FB	Poor	Poor	Outcomes highly situational; transfer effect unstable
QB	Exploratory only	Exploratory only	Sample too small for modeling

Defensive Backs and Safeties

Opportunity Model:

This linear regression model predicting log-transformed rookie snap counts for defensive backs explained approximately 11% of the variance ($R^2 = 0.107$), a modest but expected level given the strong influence of unobserved factors such as coaching decisions, depth chart competition, and injuries on early playing time. Within this model, transfer status exhibited a meaningful association: defensive backs who transferred at least once played approximately 39% fewer rookie snaps than non-transfer peers, holding college production trajectories and school context constant. These findings suggest that, for defensive backs specifically, players who transferred had reduced early-career opportunity once in the league.

A Random Forest model predicting rookie defensive back snap counts yielded similar explanatory power to the linear specification ($R^2 \approx 0.13$), indicating limited predictability of early playing time using college data alone. Feature importance rankings identified college production

as the strongest observable predictor, while transfer status played a secondary role. This indicates that while transfer status does not have as much importance in playing time as college production, for some reason defensive backs who transferred were not given as much opportunities as other defensive backs who did not transfer.

Production Model:

The production model exhibited poor overall fit ($R^2 < 0$), the estimated coefficient on transfer status was positive, suggesting that among drafted defensive backs who received playing time, transfer players may exhibit higher per-snap production. However, this result should be interpreted cautiously given the small sample size and high variability in rookie production outcomes.

Wide Receivers and Tight Ends

Opportunity Model:

Among drafted wide receivers and tight ends, rookie snap counts were weakly explained by observable college characteristics ($R^2 < 0$). Transfer status exhibited no meaningful association with early playing time, suggesting players who had transferred during their collegiate career experienced any notable difference in playing time during their rookie seasons. However school context did appear to be more relevant: Which could suggest that players finishing at higher-tier programs or transferring upward in competition level tended to receive fewer rookie snaps for some reason.

Production Model:

Among drafted wide receivers and tight ends, rookie production was strongly explained by observable factors once playing time was accounted for ($R^2 = 0.92$). Controlling for rookie snaps, college production trajectories, and school context, transfer status exhibited a positive association with early NFL performance. Specifically, transfer WRs and TEs produced approximately 38% more rookie output than non-transfer peers on a per-snap basis. This result suggests that, unlike defensive backs, transfer history for pass-catchers may reflect productive skill development or improved role alignment rather than instability, with transfers translating into greater efficiency when opportunities arise.

Defensive Linemen

Opportunity Model:

This linear regression model predicting rookie snap counts among drafted defensive linemen exhibited poor overall fit ($R^2 = -0.40$), reflecting that playing time for rookie DLs is largely driven by factors not captured in college production or transfer history such as:

- Heavy rotation
- Scheme-specific usage
- Run vs pass packages
- Veteran depth ahead of rookies
- Injury-driven opportunity

Nevertheless, transfer status was strongly associated with reduced opportunity: defensive linemen who transferred at least once played approximately 59% fewer rookie snaps than non-transfer peers, holding college production and school context constant.

Production Model:

Among drafted defensive linemen, rookie production was moderately explained by playing time and observable college characteristics ($R^2 = 0.64$). Rookie snaps exhibited a large positive association with production, confirming the central role of opportunity in generating early-career output for defensive linemen. In contrast, transfer status exhibited no meaningful association with rookie production once playing time was accounted for, indicating that transfer DLs were neither more nor less efficient than non-transfer peers when on the field. Combined with earlier findings showing substantially reduced rookie snap counts for transfer DLs, these results suggest for some reason one of the primary effects of transferring is delayed opportunity rather than diminished on-field performance. Outside of total_snaps, final_school_tier exhibited a negative association with rookie production, with each upward tier corresponding to approximately a 15% reduction in output, holding opportunity constant.

Running Backs and Full Backs

Opportunity Model:

Rookie snap counts for running backs and fullbacks were extremely difficult to predict using college production and transfer characteristics ($R^2 < 0$), reflecting the highly situational nature of early RB usage in the NFL. Transfer status exhibited no meaningful association with rookie playing time. Instead, school context played a larger role: running backs finishing at lower-tier programs tended to receive substantially more rookie snaps, while players transferring upward in competition level were used more sparingly. These findings suggest that early RB opportunity is driven primarily by role fit and workload readiness rather than developmental trajectory.

Production Model:

Among drafted running backs and fullbacks, rookie production proved difficult to explain using college performance and transfer characteristics ($R^2 = -0.50$), reflecting the highly situational and role-driven nature of early RB usage. While playing time remained positively associated with production, several coefficients exhibited large magnitudes, including a positive association with transfer status. However, given the poor overall model fit and the volatility of RB production driven by touchdowns and situational usage, these estimates should be interpreted descriptively rather than causally. Overall, the findings suggest that transfer history does not reliably predict rookie RB efficiency once opportunity is considered.