Each file used in the Challenge has its columns listed here, with descriptions for any columns that require some explanation

GameInfo

*Game-level information*

**GameId**

**Season**

**Week**

**HomeTeamId**

**HomeTeam**

**AwayTeamId**

**AwayTeam**

**StadiumName**

**CoveredStadium** - 1 if indoor, 0 if not. This will not change from game-to-game for a given stadium.

**HomeScore**

**AwayScore**

**SpreadLine** - Pre-game Vegas spread, via Sports-Reference

**TotalLine** - Pre-game Vegas total, via Sports-Reference

**SpreadResult** - The actual spread (scoring margin)

**TotalResult** - The actual game total

**Weather** - Pre-game weather as a categorical variable

**PrecipIntensity** - The pre-game intensity of precipitation (in inches/hour)

**PrecipProbability** - The pre-game probability of precipitation

**PrecipType** - The type of precipitation being projected pre-game

**Temperature** - Pre-game temperature

**WindSpeed** - Pre-game wind speed (in mph)

PlayByPlay

*Key information for each play (one row per play)*

**GameID**

**EventID** – An ID for each play of each game, typically (not always) starting at 5 and incrementing by 5

**Season**

**Week**

**OffensiveTeam**

**DefensiveTeam**

**OffTeamScoreBefore** – The offensive team’s score prior to the given play

**DefTeamScoreBefore** – The defensive team’s score prior to the given play

**Quarter**

**TimeLeft** – Time remaining (in seconds) in the current quarter

**Down**

**ToGo**

**SideOfField** – The side of the field the play started on (“Own” or “Oppo”)

**StartYard** – Yard line the play started on (paired with SideOfField to get field position)

**Hash** – The hash from which the ball was snapped for the play

1 – Left hash

3 – Right hash

2 – Anywhere between the hashes (even if it’s one foot inside one of the hashes)

**EventType** – The type of play, in terms of how it ended up. That means that QB scrambles are called runs. Plays that were modified as a result of a review have “challenge” preceding the event type.

**FirstDown** – 1 if the play gained a first down, 0 otherwise

**Touchdown** – 1 if there was a touchdown on the play (for either team), 0 otherwise

**Safety** – 1 if there was a safety on the play (for either team), 0 otherwise

**Turnover** – 1 if there was a turnover on the play, 0 otherwise

**Attempt** – 1 if there was a pass attempt on the play, 0 otherwise

**Completion**

**Spike** – 1 if the QB spiked the ball to kill the play, 0 otherwise

**ThrowAway** – 1 if the QB threw the ball away intentionally, 0 otherwise

**ThrowDepth** – The number of yards downfield a pass was thrown

**Shotgun** – 1 if the QB lined up in shotgun pre-snap, 0 otherwise

**DropType** – Categorical variable describing the type of drop the QB took on a pass play. Most are in terms of the number of steps back he took, but there are other items for designed rollouts or screens.

**RPO** – 1 if the play featured a (pre-or-post-snap) run-pass option. SIS defines this as the offensive line and backfield executing a run concept while at least one receiver is running a route.

**CoverageScheme** – The coverage scheme being employed by the defense on a pass play

**PressureOnPlay** – 1 if the QB was hurried, hit, knocked down, and/or sacked on a pass play

**SackOnPlay**

**PassBreakupOnPlay** – 1 if the pass was intercepted or in some other way broken up by a defender

**InterceptionOnPlay**

**FumbleByPasser**

**FumbleByRusher**

**FumbleByReceiver**

**OffensiveYardage** – Yards gained or lost by the offense (passing or rushing) on the play

**EPA** – Expected Points Added on the play (by SIS’s model). Importantly, on plays with a penalty following them (e.g. roughing the passer), the penalty’s value is not included.

**PlayDesc**

SkillPositionPlayers

*Every non-OL offensive player for each relevant play, their alignment, and what they were doing*

**GameID**

**EventID**

**PlayerId**

**Name**

**RosterPosition** – The player’s position as given on the team’s roster

**OnFieldPosition** – The player’s alignment at the snap, regardless of roster position. Possible alignments:

QB – Receiving the snap

B – In the backfield

WR – Pass-catchers lined up at the numbers or outside

SWR – Pass-catchers lined up at least 3 yards outside the tackles and not outside the numbers

TE – Pass-catchers lined up within 3 yards of the tackles

**SideOfCenter** – Which side of the center a player was aligned. Backfield players are not given a side.

**Order\_OutsideToInside** – Non-backfield players are numbered so that 1 represents the outermost player on that side and numbers increase as you move inside.

**IsBlocking** – 1 if the player was blocking on the play, 0 otherwise (to identify blockers on pass plays)

**Route** – Description of the kind of route the player ran on the play. SIS charts dozens of different routes based on common football concepts, but if there are any questions on the definitions of certain routes feel free to reach out.

**FastMotion** – 1 if the player was in fast motion at the snap, 0 otherwise. You can assume that a player in fast motion is in or around the backfield at the snap.

**Target** – 1 if the receiver was targeted with a pass on the play, 0 otherwise

**Reception** – 1 if the receiver caught a pass on the play, 0 otherwise

PlayerTotalPoints

*The Total Points for each player in each game*

**GameID**

**PlayerId**

**Name**

**TotalPoints** – The per-game Total Points assigned to the player in the given game, including all scrimmage plays and various elements of each play. Total Points is given in units of Expected Points Added but scaled so that the total for a team in a game is roughly the total number of points scored in a game.

*Total Points is a proprietary SIS metric that evaluates players in terms of their contribution to Expected Points Added play-to-play using dozens of charting data points. For more information see* [*this article*](https://sportsinfosolutionsblog.com/2020/12/01/a-primer-on-total-points/)*.*