Predicting Risk of Player Injury in the NFL

Every week in the fall, fantasy football managers have to juggle their rosters in order to compensate for player inactivations due to injury. This task is especially difficult for managers who do not follow every box score, headline, and tweet religiously. By gathering historical team and player data from the Sportradar US API, this project will examine the relationship between team, player position, time played, player performance, historical injuries, and other metrics. It will seek to come up with an estimator for the likelihood of injury, providing a means for calculating the total risk of a particular roster. It will also attempt to compute a risk/reward parameter that compares the likelihood of injury to current player performance for the season, enabling managers to compare players when drafting, trading, or substituting. The accuracy of the model will be judged as the current NFL season transpires in real-time. This project should aid fantasy managers (which in the past have included this author) make educated decisions and improve outcomes in fantasy leagues without having to expend significant effort following the news.