In [24]:

```
from sklearn.linear_model import LogisticRegression
import pandas as pd
from sklearn.model_selection import train_test_split
from sklearn.metrics import accuracy_score
import lightgbm as lgb
from sklearn.metrics import mean_squared_error
from sklearn.linear_model import Lasso, LogisticRegression
from sklearn.feature_selection import SelectFromModel
from sklearn.preprocessing import StandardScaler, MinMaxScaler
import eli5
from eli5.sklearn import PermutationImportance
```

In [2]:

```
feature_set = pd.read_csv('feature_matrix_w_position.csv')
feature_set = feature_set.drop(columns = ['Unnamed: 0'], axis = 1)

feature_set = feature_set.replace('H', 1)
feature_set = feature_set.replace('A', 0)

feature_set = feature_set.dropna()
```

In [3]:

```
feature_set_test_date = feature_set[(feature_set['season']==2019) & (fea

feature_set_pre_test_date = feature_set[(feature_set['season']<2019) | (
```

In [5]:

```
X_pre = feature_set_pre_test_date.drop(columns = ['dfs_points', 'player_
y_pre = feature_set_pre_test_date['dfs_points'].tolist()

feature_set_forward = feature_set_pre_test_date.loc[feature_set_pre_test
X_forward = feature_set_forward.drop(columns = ['dfs_points', 'player_id
y_forward = feature_set_forward['dfs_points'].tolist()

feature_set_defense = feature_set_pre_test_date.loc[feature_set_pre_test
X_defense = feature_set_defense.drop(columns = ['dfs_points', 'player_id
y_defense = feature_set_defense['dfs_points'].tolist()

X_train_forward, X_test_forward, y_train_forward, y_test_forward = train
X_train_defense, X_test_defense, y_train_defense, y_test_defense = train
X_train, X_test, y_train, y_test = train_test_split(X_pre, y_pre, test_s
```

## Neural Net with 3 HL and Standard scaler