FIFA 18 Ultimate Team

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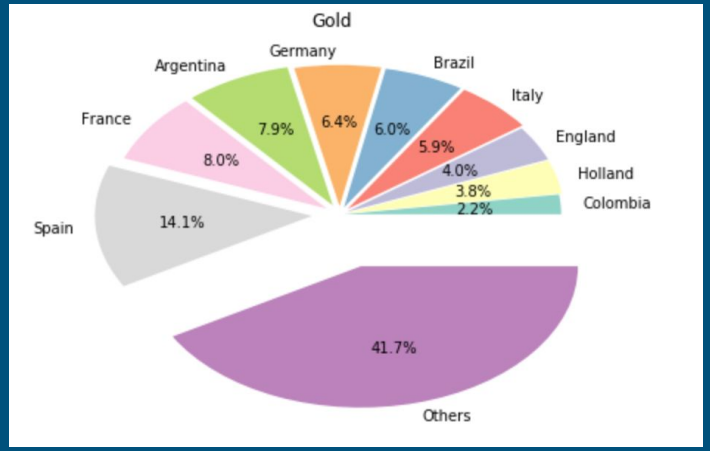
Predicting Player's Overall Rating using FIFA 18 Ultimate Team Dataset

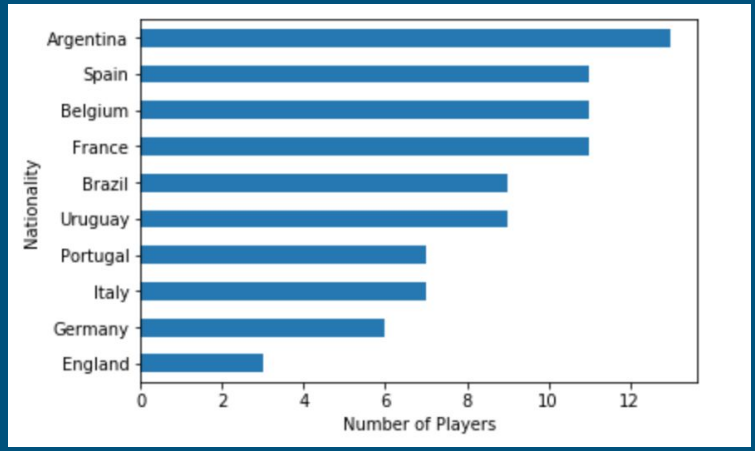
Source :
https://www.kaggle.com/stefanoleone992/fifa-18-fifa-ultimate-team

- 21561 player cards
- 84 variables
- Player's basic information (Name, DOB, weight, height, nationality, league, club, preferred position,...)
- Player's ratings in different categories (pace, dribbling, shooting, passing, defending,...)
- Target variable : **Overall rating of the player (0-100 scale)**

Exploratory Analysis of Data

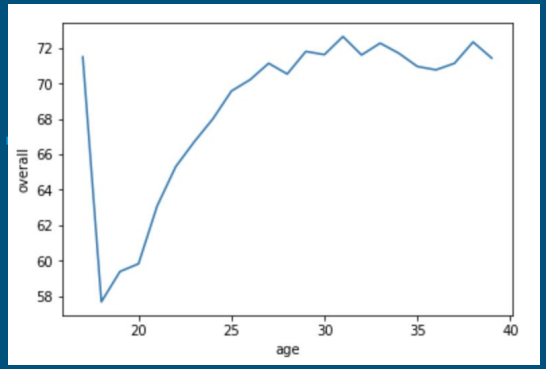


- This pie chart shows the proportion of gold type players in the top 10 countries consisting of the most players compared to that of the other countries

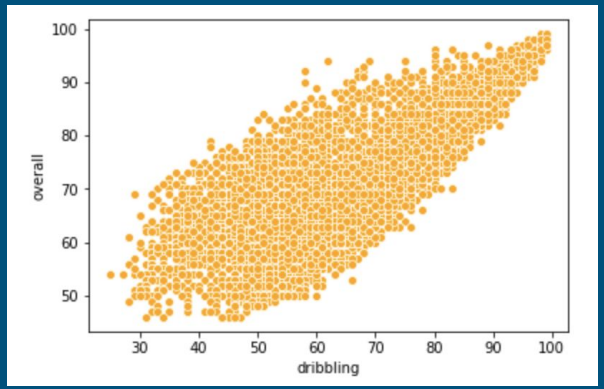


- This horizontal bar plot shows the top 10 countries that have the most top 100 overall ranking players

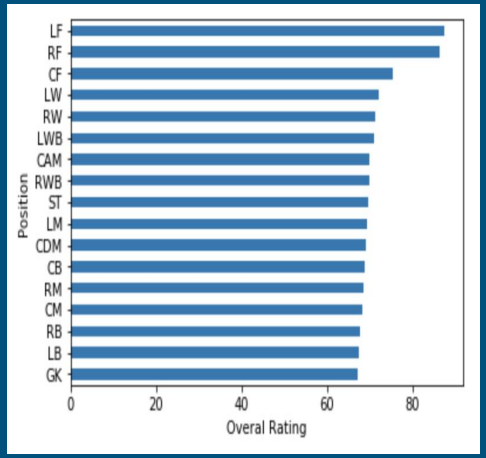
Analyze potential predictors



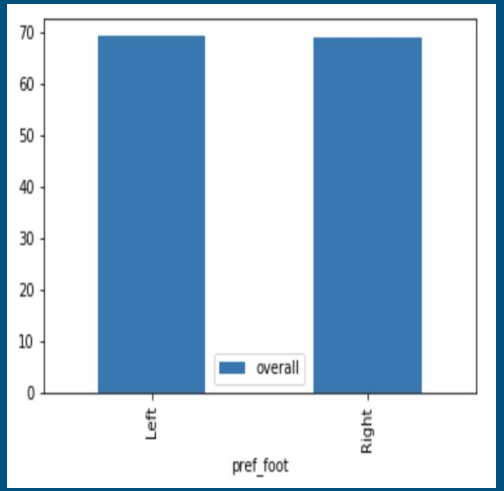
Age



Dribbling Skill



Preferred Position



Preferred Foot

Fitting Model to Data

- Linear Regression Model
- 39 predictors (reduced to 32 by LASSO method)

  (age, height, weight, and other skill ratings)
- Target variable : Overall rating of the player

Relationship between Overall Rating & Some Predictors

overall	1.000000
intl_rep	0.667228
dribbling	0.717977
drib_reactions	0.889093
drib_ball_control	0.524051
drib_composure	0.688210
shooting	0.614223
shoot_shot_power	0.517982
passing	0.757915
pass_vision	0.584783
pass_short	0.575244
pass_long	0.539114
physicality	0.560199

Conclusion

1. Overall ranking of a virtual player in the game can be predicted using information about his skills.
2. After using LASSO to shrink the model, we still have 32 variables in the reduced model, which is still quite large of a model
3. In reality, however, we consider having 32 predictors is reasonable since each player needs to be evaluated holistically. Being good at only a certain skill set would not qualify a player to be the top player.