

# Algorithm

## Linear Regression

It is the most well-known and popular algorithm in machine learning and statistics. This model will assume a linear relationship between the input and the output variable. It is represented in the form of linear equation which has a set of inputs and a predictive output. Then it will estimate the values of coefficient used in the representation.

## Classification Algorithm

In this data is classified in different categories and further analysis done on each category for particular result. For example we can classify players of Fifa 19 in good players or weak players etc.

## Collaborative Algorithm

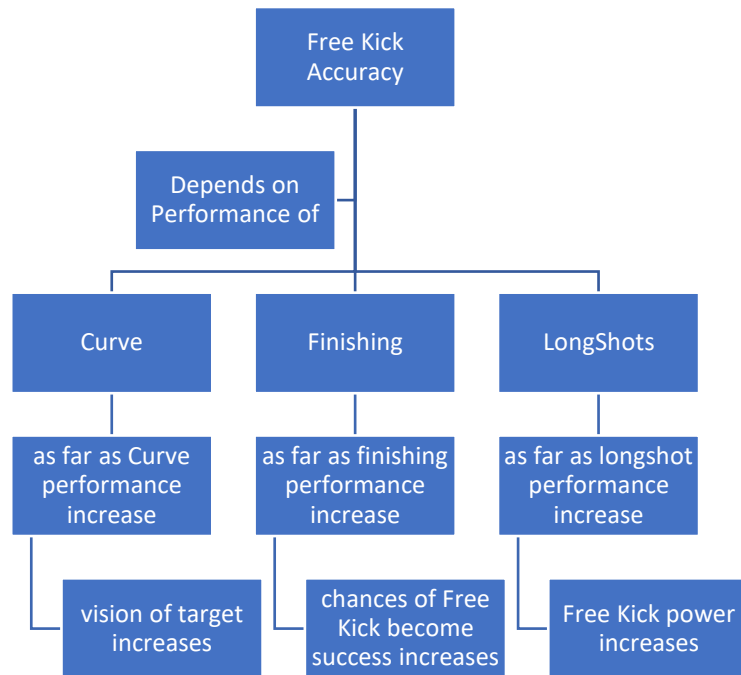
This is used for predicting some output or information based on different inputs are came, for example in University maximum student learning masters in Mathematics from 8 years it's may happen that next year also be max students from mathematics.

## Decision Tree:

Decision trees are used for both classification and regression problems, Decision trees often mimic the human level thinking so it's so simple to understand the data and make some good interpretations.

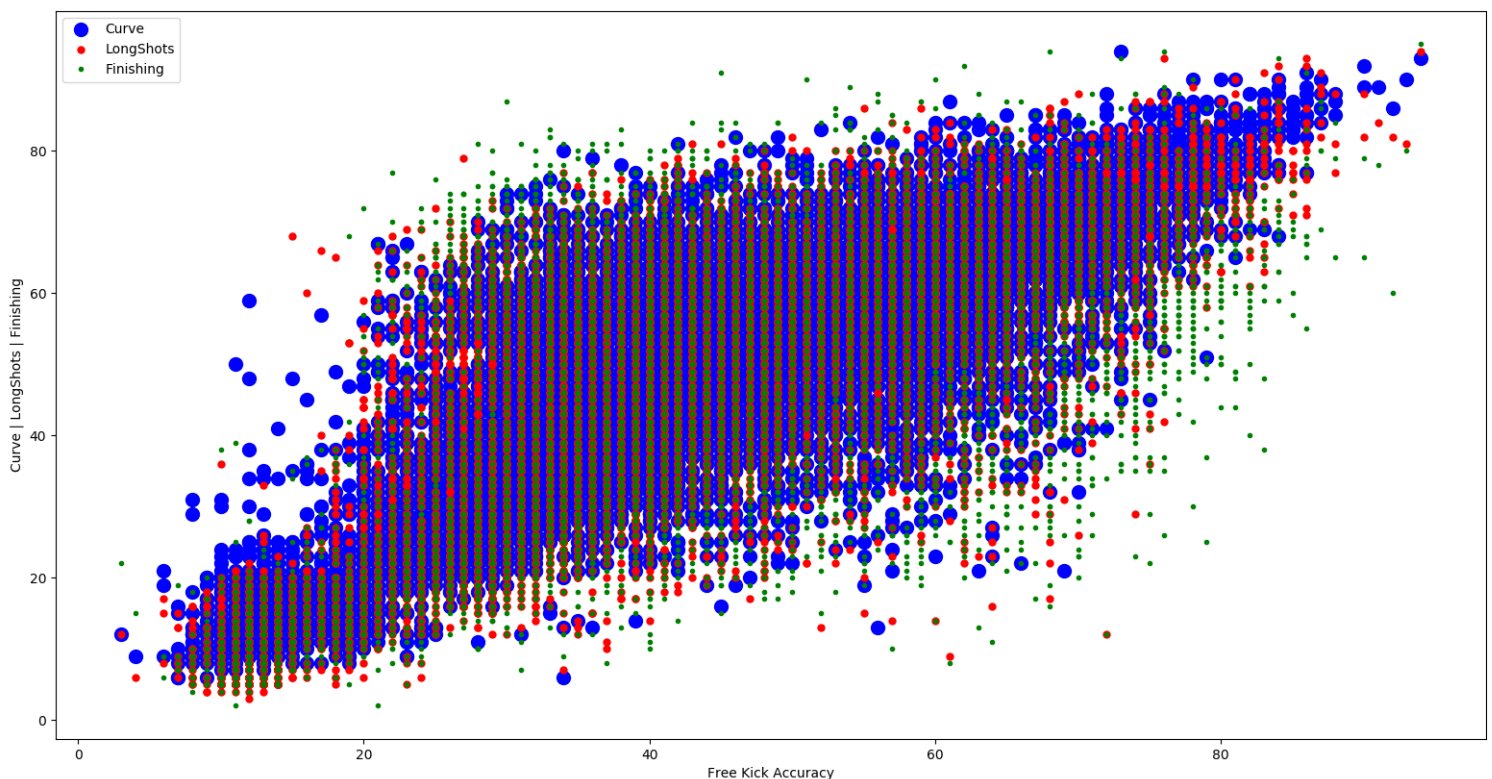
# Decision Tree — Making decision about Players Free Kick Accuracy

As this graph represents we can take a decision of Free Kick Accuracy of Player on the performance of player's Curve, Long Shots and Finishing.



## Python Code

```
plt.plot(df.FKAccuracy,df.Curve,"bo",markersize=10);
plt.plot(df.FKAccuracy,df.LongShots,"ro",markersize=5);
plt.plot(df.FKAccuracy,df.Finishing,"go",markersize=3);
plt.legend(["Curve","LongShots","Finishing"])
```



## Conclusion:

The **BLUE** dots representing the **vision clarity** of, **RED** dots representing the **Power** and **GREEN** dots representing **chances of success** of players while free kick is concerned.