

Introduction

- FIFA 19 is a soccer video game. There are many playing modes but the one that appeals me the most is career mode.
- The integral part of career mode is overall rating which decides how good a player is and decides his market value.
- The goal of this project is to determine the overall of a player which determines the success of a person playing the game.

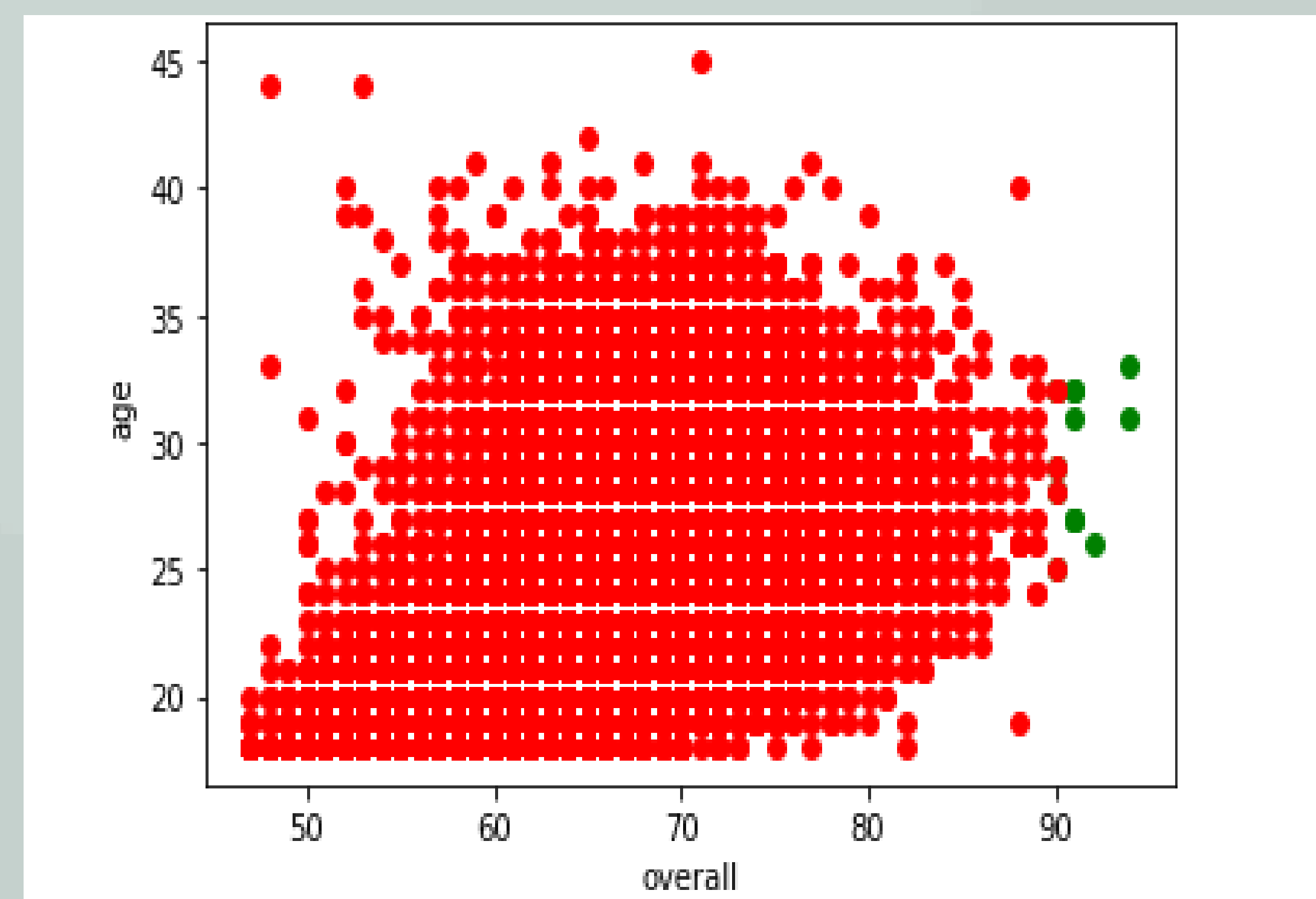
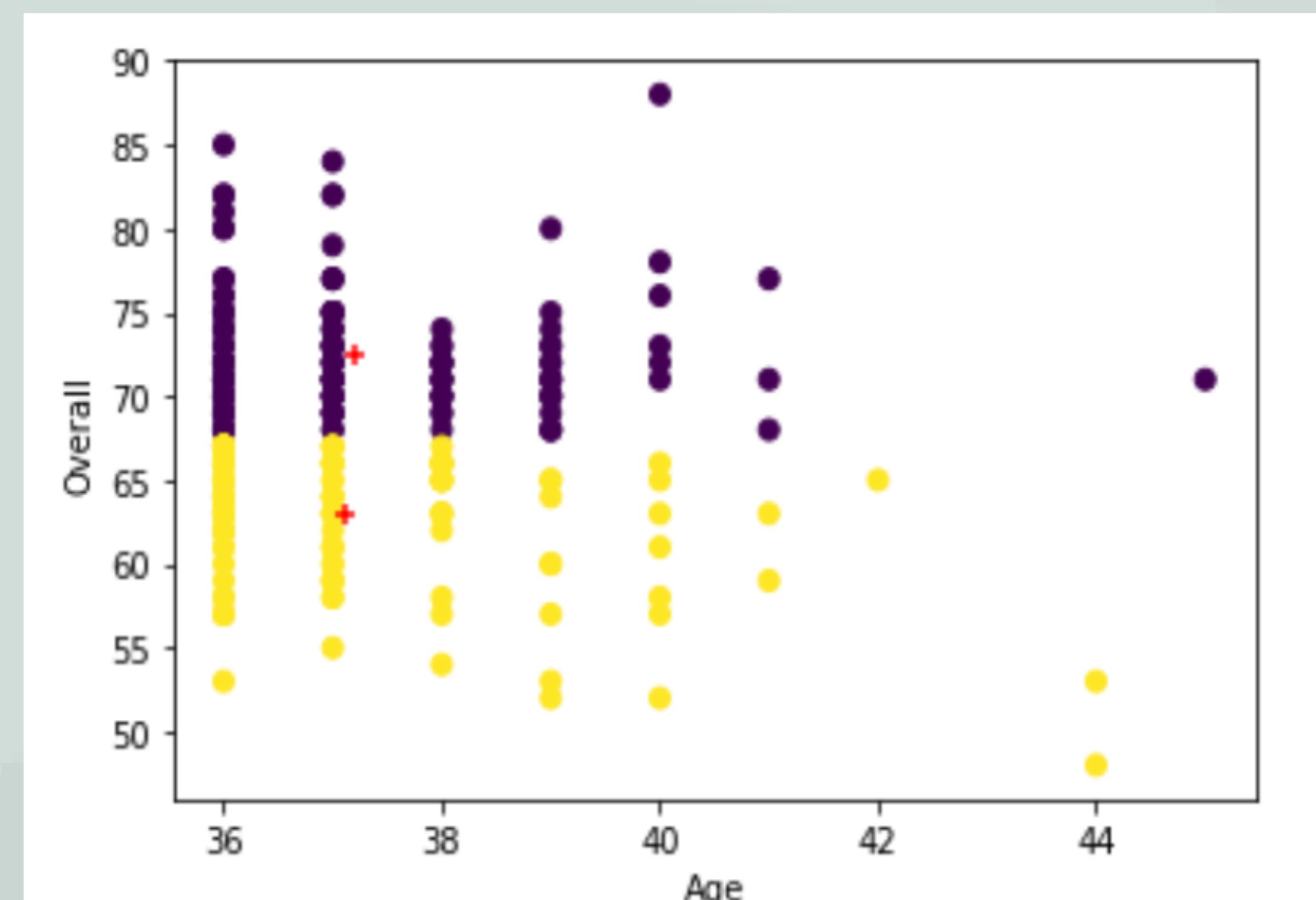
Materials/Methods

- Features
 - Age of the player.
 - Potential(The maximum rating a player can reach in the future.)
- Performed data cleaning to remove unwanted values.
- Performed linear regression to find the correct features and relationships.
- Performed classification to predict group memberships and perform feature selection.

Based on the clustering I would pick a player who has more age and whose value is closer to the centroid of the top cluster rather than the bottom cluster.

Based on the scatter plot I have determined that a player would have an overall rating of 90 or above only when there age is between 25 and 35. This is acceptable

Results



Conclusions

- Evaluation of Overall rating of a FIFA player based on his age and his potential.
- The data I have chosen is continuous so I performed linear regression to predict the overall rating with age and potential with an accuracy of 82%.
- I have classified the players based on their overall ratings into 4 groups and performed decision tree classifier to determine if a player belongs to a particular group or not with an improved accuracy of 90%.
- I have performed PCA i.e. dimension reduction and found that the features I have chosen are both required as the Rsquared values is too less.
- I have performed clustering to determine whether or not to invest on a player whose age is above 36.
- In feature I would predict how much a player rating would decrease if he plays in a different position.

Additional Resources

- <https://www.kaggle.com/karangadiya/fifa19>
- https://scikit-learn.org/stable/auto_examples/classification/plot_classifier_comparison.html

Acknowledgements

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Poster Repository

<https://github.com/rahulreddy062/ml-project-poster>