

Football Player Recognition and Analysis System

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Introduction

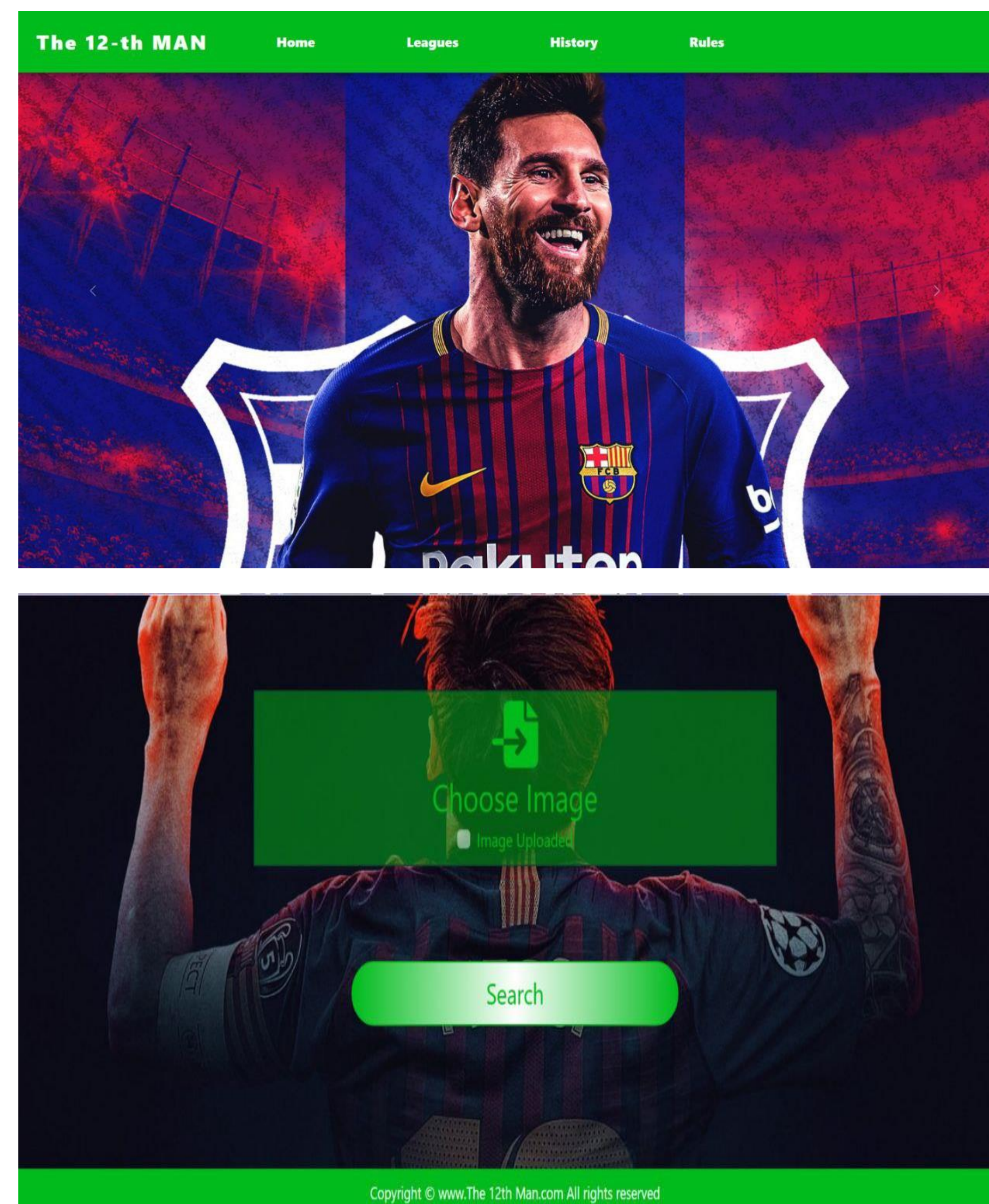
The main task of football: player recognition & analysis system is to increase the interest of people (specially in youth) so that people get to know more about football and the game can get its actual value as it has in other parts of world. The sports sector in India has witnessed several recent developments, which have contributed to its significant growth. Although the game was always popular across certain regions and pockets of society, we are trying to build a project to provide all the information and all the rules at a same place. There are multiple websites which provide details but this website will provide not only the details about the football but as most of the people in India knows only three or four players so this project provides player recognition technology which will classify the player on the basis of a photograph or name which will provide all the details and statistics about that player in addition the user can find out the all the leagues and clubs present currently with the help of the available links on our website. By this project we are trying to gain interest of youth mainly so that India can become a football giant in future as it is in cricket in current world.

Objectives

- Our website will be promoting the football sport related activities and will give the information about all the leagues and clubs present in football.
- The purpose is to develop a model using which user can identify the player and its statistics based on the past data.
- Over time, the interest of sports clubs in issues and technologies belonging to Artificial Intelligence is growing.
- The goal is to implement a system capable of providing strategic indications to coaches, thanks to the modelling and techniques of Machine Learning and to develop a new gaming experience for fans.
- It is a easiest platform for all football fans through which user can search and identify the player, find out the best ones and all the rules and positions present in football.

Features

- Gives accurate information of the player
- Gives information about various leagues and clubs
- Provides statistics in different forms
- Easiest platform for searching the player
- Gives knowledge about football in brief



- Current Leagues – We will cover most of the popular ongoing leagues of football around and globe such as Premier League, La Liga, Indian Super League and Champions League.
- Clubs and Leagues – In this section we will cover the part that which clubs falls in which league and which league belong to which part of world and how does teams qualify for the champions league.
- Players Identification – As we know in our country most of the people know only few of the football icons so we will try to make them familiar with more players by providing player recognition system which will detect the player on the basis of name or photograph.
- Player Stats – In this section we will provide all the statistics related to searched player i.e. He plays for which club, his nationality, his age etc.

Technology Used

Frontend-

HTML

CSS

Javascript

Bootstrap

These technologies are used in making user interface

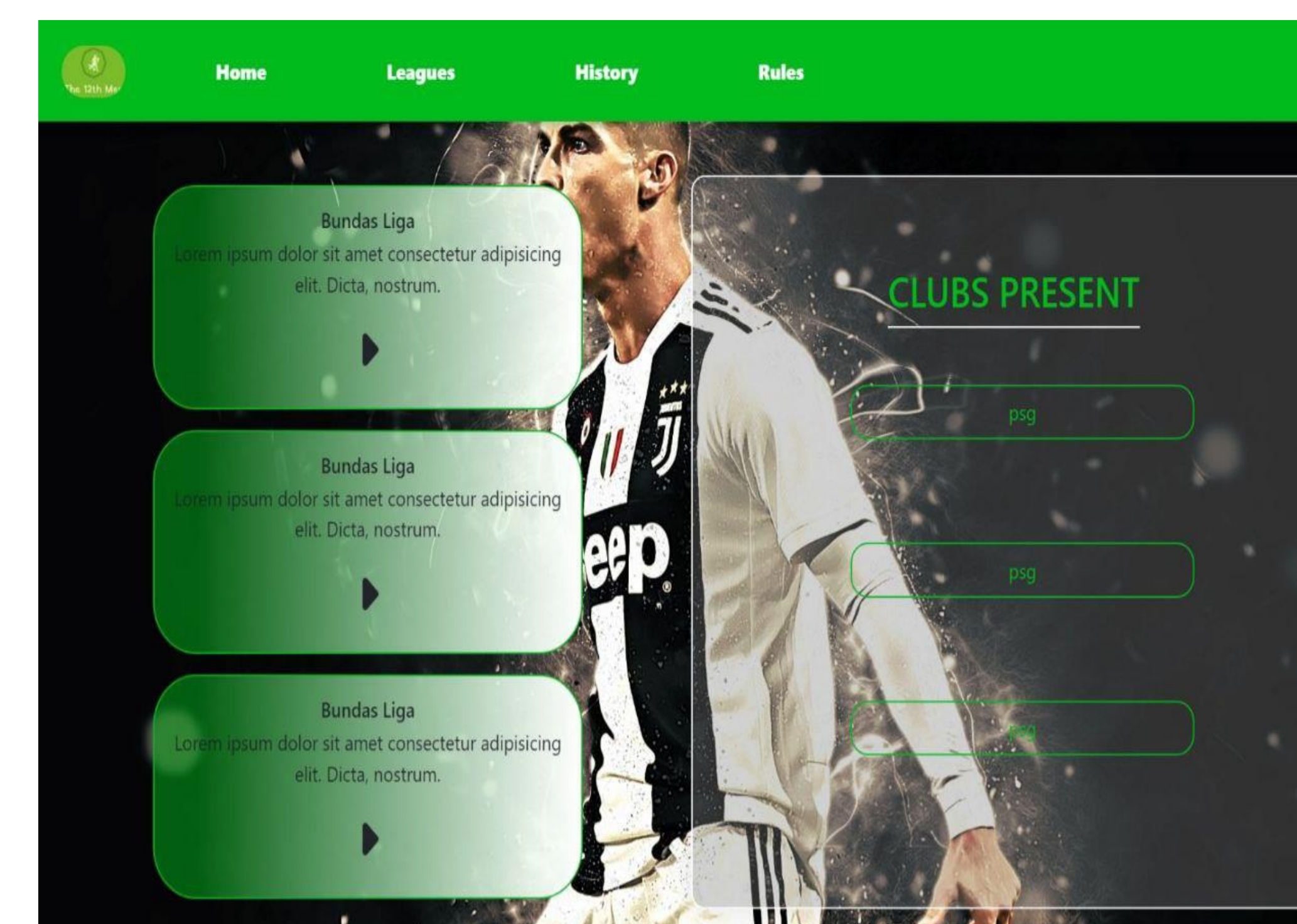
Backend-

Node js – Node.js is a cross-platform, open-source server environment that can run on Windows, Linux, Unix, macOS, and more. Node.js is a back-end JavaScript runtime environment, runs on the V8 JavaScript Engine, and executes JavaScript code outside a web browser. Node.js lets developers use JavaScript to write command line tools and for server-side scripting. The ability to run JavaScript code on the server is often used to generate dynamic web page content before the page is sent to the user's web browser.

Python- Python is a high-level, general-purpose programming language. Its design philosophy emphasizes code readability with the use of significant indentation via the off-side rule.

Haar Cascade Classifier-Haar cascade is an algorithm that can detect objects in images, irrespective of their scale in image and location.

This algorithm is not so complex and can run in real-time. We can train a haar-cascade detector to detect various objects like cars, bikes, buildings, fruits, etc. Haar cascade uses the cascading window, and it tries to compute features in every window and classify whether it could be an object.



Conclusion

We have proposed an efficient system which identify football players from the photograph and provide statistics of the players. Our system uses Open CV and Haar Cascade Classifier for the recognition of the player, with the advantages of giving information about the leagues and clubs and to fulfill our objective that is to create awareness and interest among youth about football through our website. Our results shows that the model can perform well on the dataset obtained from Kaggle, indicating the wide applications of this algorithm. Having done all above processes successfully, the model was able to identify players from the same team. Detection is just the beginning. Now we can really take it to the next level! We can now quickly analyze the course of the action, knowing how the ball traveled between players, count the distance the players traveled, or locate the field zones where they appeared most often.

References

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