

Functional Specification

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Vision

1.Purpose of the application

The purpose of this project is to build a web application which could help people with decision making when placing bets in most popular sports such as football, basketball, American football and hockey and it would predict outcomes by analyzing statistics and creating training and testing data sets from them to be able to predict outcomes using machine learning algorithms. The content of the website should be updated automatically and it should run on server. The web app should also contain content such as latest scores tables upcoming fixtures so user would be able to check if the predictions are correct.

2.Positioning

Sports predictions has become very popular over the last few years. To have such an web application comes in handy for the people who likes these kind of sports and need a help of choosing which teams to put on their betting slip. This web application will be developed to run both on computers and mobile phones. Why a web application and not Android or IOS app ? Because I want it to be compatible on all devices(computer, mobile phone, tablet). Web application don't need to be installed which makes it faster and more storage friendly. The only disadvantage with web applications is that it requires internet connection all the time but in today world people can connect to internet almost everywhere so it shouldn't be a big issue.

Target audience

Target audience of this application will be people who are interested in the sports that will be available, people who like to place bets and need a help in choosing teams that will win draw or loose. It also will target users who like sports not only for bets as my app will have few features that every fan can use like showing current table, predicted table at the end of the season, upcoming fixtures, latest results, statistics for each team, live scores.

How it will become successful?

In this world there is millions of sports fans all around a world. Most of the fans intent to bet every week in hopes to win some extra money. Researchers says that only 13% of all the gambler actually end up winning I think my application would attract a lot of people if the prediction would be more accurate than average gambler can guess. But also my application would attract people who are not only interested in placing bets but who are interested in the particular sports as my app will provide more features such as (showing stats, current table, live scores, showing recent results).

Possible features:

- Including 3 sports(basketball, hockey and football)
- Showing statistics for each match that is predicted
- Showing predicted matches from last week and how many predictions were successful
- Predicted tables and potential winner of the competition
- Predict correct score line of each match
- Display upcoming fixtures as well as current team standings and latest results
- Live scores
- User should be able to log in

- Percentage of how sure the algorithm is that the particular prediction will happen
- Provide easy to use GUI
- Content of the page should be updated every day for users to see fresh content

Project steps

This project will require following steps:

1. Web scrapping data from various websites
2. Implementing machine learning algorithms
3. Testing
4. Deploying website on the server/cloud
5. Make content of website automatically updated
6. Get domain

Software overview

The application has to provide nice GUI which will be very easy to use for all the users clear text and navigation bar should be a priority in the design of the GUI.

The system will be made of two parts

- Client side:
Web application will be run on client such as(Internet explorer, Chrome, Firefox). The users will be able to choose from different sports view statistics of each team when looking at predictions of the upcoming matches, users will be able to view live score from the matches currently playing to show the score and the minutes played in the match all the information on the webpage will be updated automatically.

- Server side:

The point of having a server side application is to provide fresh content to users at all times. Parser will be run automatically few times throughout the day parsing all the information's from various sports websites to deliver fresh content to users. It will also update training and testing sets to provide more accurate predictions.

Context diagram:

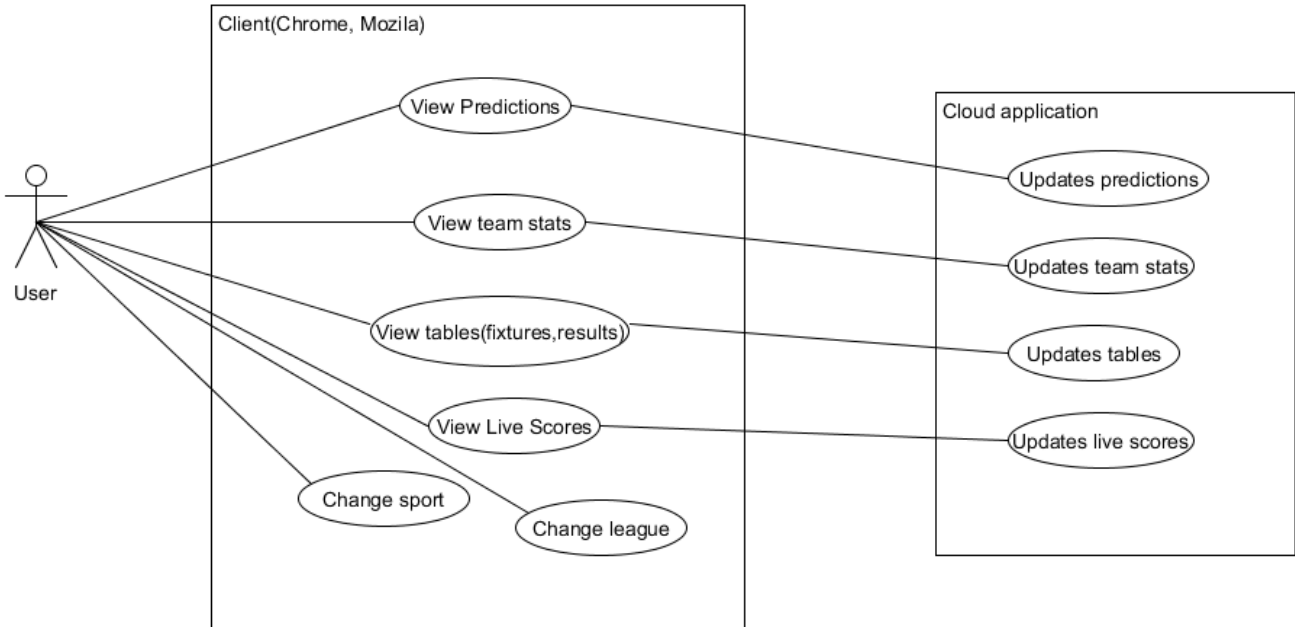


Main risk of the project identified

- Business Risks:
 - Competitors: there are many such system already available.
 - Value Proposition: this has not be validated yet.
 - Costs and revenues have not been estimated.
 - Web application are harder to find for users than IOS/Android application which can be found easily on their app stores.
- Technological Risks:
 - The cloud platform has not yet been chosen.
 - Machine learning algorithms were not chosen

Use case

Use case model



Brief Use Cases

View predictions

Actors: User, Client, Cloud application

Description: This use case starts when user wants to view predictions for next week. User will choose sport to view predictions by clicking one of the buttons on the top of the web page. The cloud application role in this scenario is to update the predictions by running jar files every day.

View team stats

Actors: User, Client, Cloud application

Description: This use case starts when user wants to view team stats for each prediction made. User will choose sport by clicking one of the buttons on the top of the web page. To view statistics user will have to click on one of the match predictions. The cloud application role in this scenario is to update the stats.

View live scores

Actors: User, Client, Cloud application

Description: This use case starts when user wants to view live scores. User will go to football section as the live scores are only available for football . User will click on view lives scores button on top of the webpage. If there are no outgoing matches at that moment system will display message saying so. If there are they will be displayed to the user. Cloud application will update live scores every time user will click on refresh button.

Site Design

HTML Requirements and Guidelines

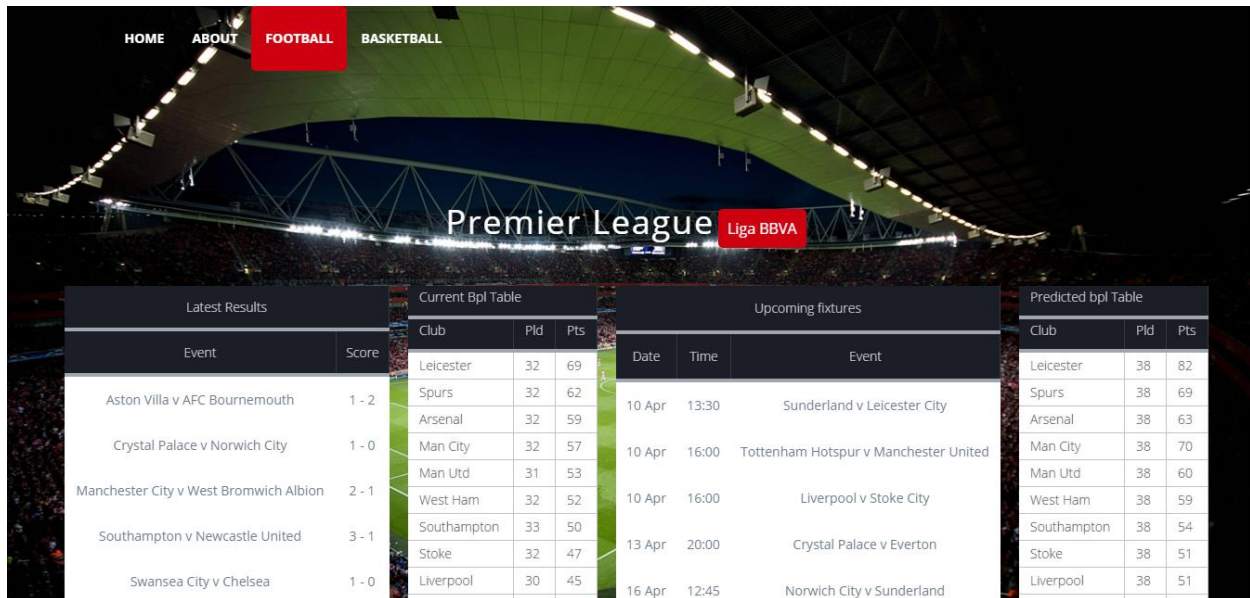
This web app must deliver a compelling visitor experience.

Requirements

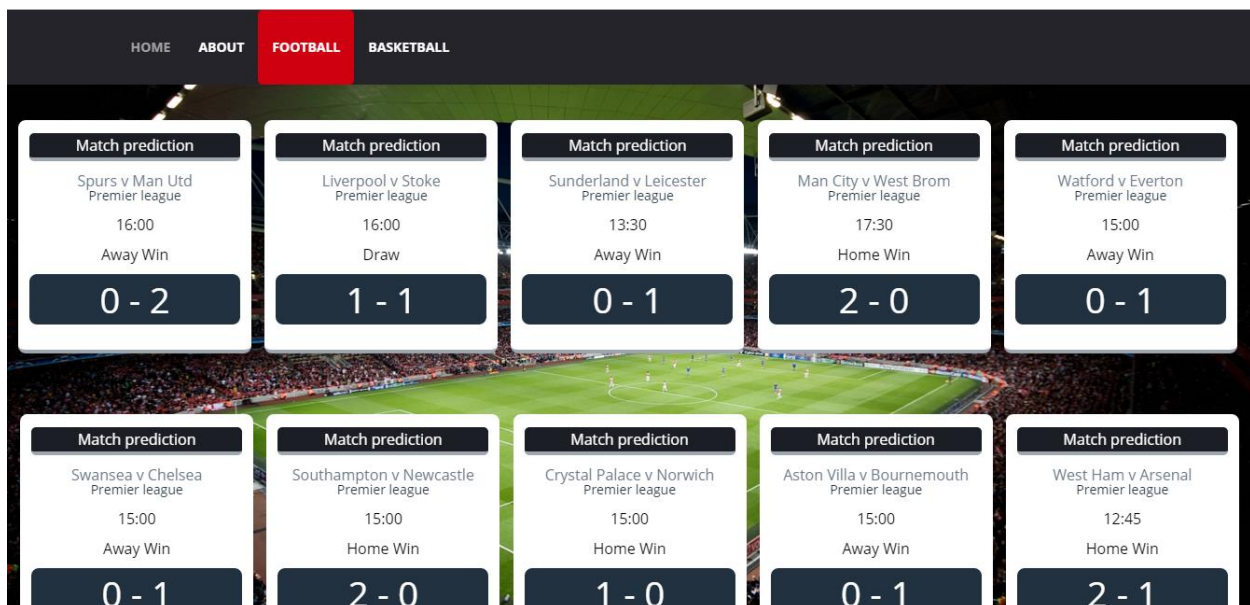
This web app must conform to the following requirements:

- The site should be HTML 4.0 compliant.
- All pages must download in less than 10 seconds over a 56k modem connection.
- All pages must fit in a web browser displayed on a computer set to 640 x 480 pixels. Website should fit in web browser of a phone.
- All pages must use a web safe color palette.
- The site must be compatible with Internet Explorer 4, 5 and 5.5, and with Netscape 4-6, as well as AOL 4.0 and later, and Opera.
- The site should not use frames.
- All pages that use multimedia, such as Flash, must 'sniff' for the correct plug-in and display a static image if necessary.

GUI

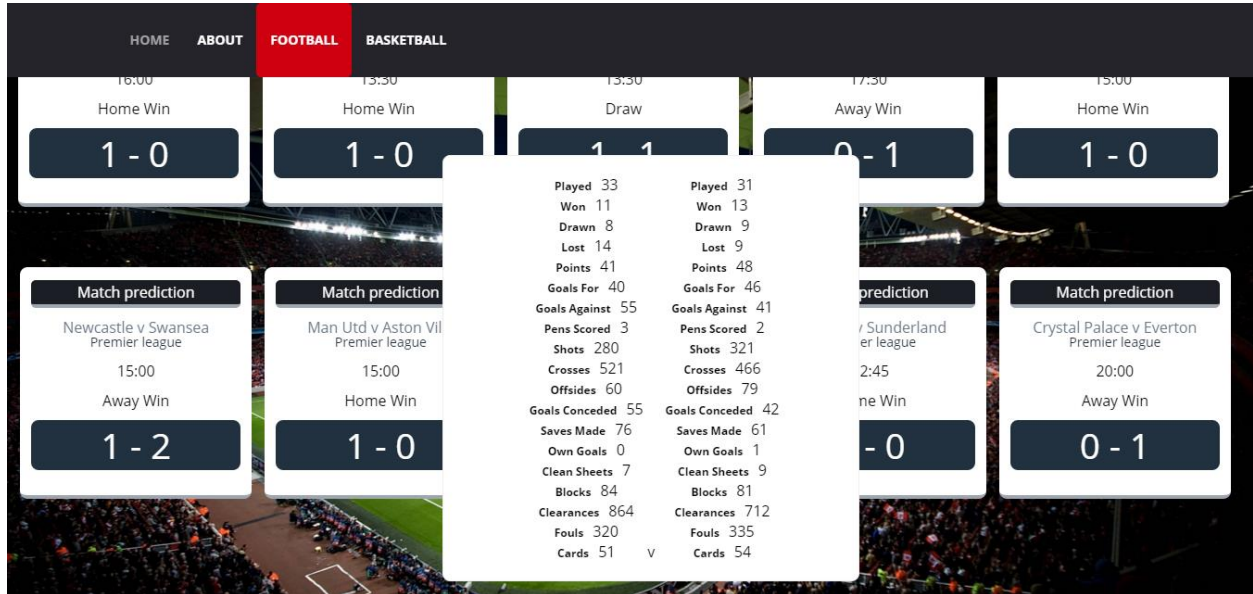


Users will be able to view latest results, upcoming fixtures, current tables and predicted league table by clicking on liga BBVA users will switch to Spanish league and all the content change. Users can also choose Basketball as the sport they want to view.



This is a GUI for prediction I wanted something different than just a simple table with predictions in it so I decided to redesign the table that I created for

predictions at first and create these boxes which show different information of the game like time, 1x2 prediction, correct score line prediction, name of the game, name of competition.



When clicked on upcoming prediction box with statistics for each team involved will be displayed with home team stats on the left and away team stats on the right. This is feature is useful for users so they are able to see based on what statistics are these prediction predicted.

Supplementary Specification

Introduction

The Supplementary Specifications capture the system requirements that are not captured in the (functionality, usability, reliability, performance , supportability)

Functionality

System Error Logging

All errors should be logged to persistent storage.

Usability

The web application should be viewable on all devices (Tablets, phones, computer)

For all screen sizes.

Users should not wait long for the website to be fully loaded it should take few seconds. Users should be able to switch between each pages easily without any problems.

Parser which will be run every day to provide brand new information for the web application should be well written without any errors . From 100 times the program is run there shouldn't be more than 4% fails.

Performance

The web application should load fast and should be fast also when using slower internet.

Supportability

If something fails developer should get error message and fix it as fast as possible.