# Premier League predictive learning algorithm (PLePA)

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# Glossary

PLePA – Premier League predictive learning algorithm, the name of the project.  
Premier League – The highest league in English football.

# Section 1 Preparation and planning

## Project Description

The project is to create a predictive algorithm for Premier League results. It will use historic data; it will use the last three years’ worth of data. This may be extended or reduced but that will depend on the ease of gathering and cleansing the data.

The result is aimed at Premier League fans and people interested in the prediction of football results. It’s also something I have an interest in solving, I do a bit of sports betting so this could prove useful for this.

The aim is to produce four separate algorithms and determine which has the most accurate results. The four algorithms I will use are Support Vector Machines (SVM), Random Forest, Naïve Bayes and KNN. The goal is to have around a 75-80% pass rate, this will be a benefit to all football fans, fans who place bets and even possibly teams, that may be a bit far though.

If the project is unable to give good results after many iterations for each algorithm and tweaking the numbers, then it will serve as research for people who take on a similar project. There is no real issue if it not developed because it is more of a personal project and I am the only stakeholder.

There are different ways to achieve the results, the aim is to develop four separate predictive algorithms, this will give the opportunity to move on if one is not going well.

The stats data will be stored in a MySQL database and all the algorithm code will be written in Python. All code and documents will be stored in a GIT repository. A stretch goal would be to have an interface for user interaction or to pull the latest set of fixtures from a football website.

## LEPSI review

|  |  |  |  |
| --- | --- | --- | --- |
| Act / Law / Guidance | Purpose | Relevance to my project or n/a and why not applicable | How my project will be affected |
| Data Protection Act 2018 (DPA) | Control how personal information is used by organisations, businesses or the government (UK Government, 2018) | I will not be using any personal information in my project, so this is not applicable for me. | My project will be unaffected. |
| Equality Act 2010 | Protection from discrimination in the workplace and society (UK Government, 2012) | I will not be looking at people in my project so this will not be applicable for me. | My project will be unaffected. |
| Computer Misuse Act 1990 | The act was brought into place to prevent people gaining unauthorised access to computer material, commonly known as hacking. (UK Government, 1990) | My project will likely not involve connection to the internet. It may do, if I reach my stretch goal to connect to a sports website for latest fixtures. | If I reach my stretch goal for connection to the sports website to get the latest fixtures, I will ensure the connection I have is secure and authorised. It likely will be authorised since the website will be publishing it. |
| Copyright | To protect your work by preventing it being copied, redistributed, adapted and put on the internet are some of the example (UK Government, n.d) | I will need to make sure the data that I use for past football results is not protected by copyright and can be used. | I will need to ensure I am able to use the data and not breaking copyright rules. |
| Freedom of Information Act | It gives the general public access to certain information on request from the public authorities. The public authorities are also obliged to publish certain information. (ICO, n.d) | This will not affect my project because I am not working for a public authority and I don’t require data from a public authority. | My project will be unaffected. |
| Protection from harm | Protect participants of studies from any harm, physical or psychological, particular care should be paid to children. (TM470 course team, 2012) | This will not affect my project because I’m not using participants. | My project will be unaffected. |
| Professional codes of practice and ethics | This allows participants to understand the purpose of the study, the researchers must state their intentions. (TM470 course team, 2012) | This will not affect my project because I’m not using participants. | My project will be unaffected. |
| BCS Code of Conduct | To set out standards across the board for all members of the BCS. An example is having respect for public health, privacy, security and wellbeing of others and the environment. (BCS, June 2019) | This will not affect me directly because I’m not a member of the BCS, however, I should try to comply with the standards set out by the BCS such as honesty with my skillset and acknowledgment to any borrowed source code used in my project. | I must ensure that borrowed code is acknowledged, and I am not overexaggerating my skillset. |

# References

UK Government (2018) *The Data Protection Act* [Online]. Available at <https://www.gov.uk/data-protection> (Accessed 1st April)

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TM470 course team (2012) *‘Legal, Social, Ethical and Professional issues’ in TM470 study material, The Open University, Milton Keynes* [Online]. Available at <https://learn2.open.ac.uk/mod/oucontent/view.php?id=1184585> (Accessed 1st April)

BCS, The Charted Institute for IT (June 2019) *Code of Conduct for BCS Members* [Online] Available at <https://cdn.bcs.org/bcs-org-media/2211/bcs-code-of-conduct.pdf> (Accessed 1st April)