MAKERERE****UNIVERSITY

**COLLEGE OF COMPUTING AND INFORMATION SCIENCES.**

**DEPARTMENT OF NETWORKS**

**BACHELOR OF SCIENCE IN SOFTWARE ENGINEERING**

**RECESS 2018 – GROUP 6**

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**INTRODUCTION**

The project aims to enable fans of men’s football to analyse the performance of a team and seed teams to take part in the World Cup tournament. We will also analyze the procedure used by FIFA to create the world rankings.

**BACKGROUND**

In December of 1992, the Federation Internationale de Football Association (FIFA) released the first ever World rankings of men’s national football teams with the aim of clarifying the relative positions of FIFA member nations. These rankings were first updated in August of 1993 and every other month after that.

Over the years, the procedure of ranking national teams has had been updated as follows:

*1993-1998*

Originally, FIFA used a traditional league system to rank teams. A win was 3 points, draw a point and a loss none. Later, FIFA realized that there were many more factors involved in international games.

*1999-2006 ranking system update*

Other factors were considered in determining the ranking such as:

* number of goals scored,
* whether the match was played home or away,
* importance of the match,
* regional strength

and thus the point ranking was scaled up to a factor of 10 making match losers able to earn points.

*2006 update*

The evaluation time on which the rankings were based was cut from 8 years to 4 years. Factors such as goals scored, and home advantage are no longer considered. This is the latest update.

This project builds upon FIFA rankings to predict who wins the FIFA tournament versus the actual results of the tournament. In this way, we determine how effective the use of FIFA rankings is in predicting the eventual results of the tournament.

**PROBLEM**

The problem this project addresses is the uncertainty in using the FIFA rankings to predict the result of the FIFA World Cup tournament. Is it a viable option to use the rankings in prediction or not? This is the question this project aims to answer.

The main goal of this project is to determine how feasible it is to use FIFA rankings to predict the result of the World Cup tournament.

The objectives of the project are to:

* Establish a correlation between FIFA rankings and World Cup results.
* Using FIFA rankings data from August 1993 - June 2018, an investigation will be made to derive the relationship between the rank of a team by FIFA and its advancement into the World Cup tournament; and results of participating teams in the World Cup tournament between higher ranked teams and lower ranked teams.
* Establish which factors are important in determining the ranking of a team by FIFA. The factors are the criteria used to determine rank and for the rankings to be viable, we need to establish which ones matter have a greater impact.

The anticipated insights resulting from this project are:

* A model that predicts the winner of the World Cup tournament using rankings data as an input. The effectiveness of the model will also be determined to fulfill the eventual goal of the project.
* A defined relationship between FIFA rankings and the World Cup tournament results.

**METHODOLOGY**

The Agile software development methodology will be used to accomplish the above objectives. The development of the predictive model will be broken down into ‘stories’ as tasks to accomplish in several iterations per day.

More specifically, using *Kanban* to manage the development without overburdening the team. Tasks go through four stages; *in-progress*, *testing*, *ready-for-release* and *released*. We shall incrementally make updates to the model, adding rank determining factors and testing the model thereafter.

**REFERENCES**

Football Science Vol.5, 18-25, 2008

<http://www.jssf.net/home.html>

FIFA World cup rankings

en.wikepedia.org/wiki/FIFA\_World\_Rankings

Concept Paper Format

cit.mak.ac.ug

World Cup Analyzer – worldcupanalyzer.wordpress.com