**WORLD CUP ANALYZER FINAL PROJECT REPORT**

**SUBMITTED BY GROUP-6 IN PARTIAL FULFILLMENT OF THE REQUIREMENTS FOR THE RECESS TERM PROJECT**

**Table of Contents**

1. Introduction 1

1.1 Purpose of this document 1

1.2 Intended Audience 1

1.3 Scope 1

1.4 Definitions and acronyms 1

1.4.1 Definitions 1

1.4.2 Acronyms and abbreviations 2

2. Background and Objectives 2

3. Organization 2

3.1 Project Manager 2

3.2 Project Group 2

3.3 Supervisor 2

4. Milestones 3

4.1 Remarks 3

5. Project Results 3

5.1 Requirements 3

5.1.1 Requirement Compliance Matrix 3

5.1.2 Requirements Compliance Summary 4

5.1.3 Remarks 4

6. Project Experiences 4

6.1 Positive Experiences 4

6.2 Improvement Possibilities 4

7. Financials 5

7.1 Project Cost Summary 5

8. Metrics 5

8.1 Milestone Metrics 5

1. **Introduction**

The World Cup Analyzer is a project undertaken as a mandatory requirement for the course “Professional Software Engineering Mini Practical Project II” that is being conducted by the College of Computing and Information Sciences at Makerere University for the second-year students of software engineering. The aim of the course is to introduce and enable students gain a practical understanding of data science. In this course, we use the R programming language to analyse the FIFA Rankings data set in a team of four.

* 1. **Purpose of this Document**

In this document, there is overall description of the World Cup Analyzer software. It includes what we did. There is also a description of the work experience gained from this project. The description of the designing phase and cost is also included.

* 1. **Intended Audience**

This document is intended for the development team of the World Cup Analyzer software in case of future improvements. It is also for the supervisors of the project.

* 1. **Scope**

The project is aimed to provide men’s football fans interested in analysis with a visualisation and prediction model that can predict how far a team can go in the FIFA World Cup tournament and also seed teams into groups. (Teams that qualify for the World Cup are seeded into groups).

* 1. **Definitions and acronyms**
     1. Definitions

|  |  |
| --- | --- |
| Key words | Definition |
| FIFA | International organisation responsible for organising football’s major tournaments including men’s football. |
| FIFA Ranking | Known as the FIFA World Ranking, it is a ranking system for men’s national teams in association football. |

* + 1. Acronyms and Abbreviations

|  |  |
| --- | --- |
| Abbreviation | Definition |
| FIFA | Federation Internationale de Football Association |

1. **Background and Objectives**

The beginning of this project saw us with a .csv file detailing FIFA Rankings for men’s national teams from August 1993 to June 2018. We have used that file to enable users get information on any team of their choice as easily as clicking on it from a drop-down in a summarised way that also predicts how far it can go in the World Cup. We have also used it to enable users seed teams that qualify for the World Cup into groups.

1. **Organisation**
   1. **Project Manger**

Phillip Mulindwa Musumba is the manager of Group-6.

* 1. **Project Group**

|  |  |
| --- | --- |
| **Name** | **Responsibility** |
| Albert Muhumuza | Integration, Testing, Documentation |
| Calvin Karegyeya | Back-end system design, Implementation, Testing |
| Esther Nangobi Mirembe | Documentation, Analysis |
| Phillip Mulindwa Musumba | Project Manager, Visualisation, Analysis |

* 1. **Supervisor**

Isaac Mbabazi was our group supervisor.

1. **Milestones**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Id | Milestone Description | Finished Week | | Remarks |
| Forecast | |
| Start Date | End Date |
| M-001 | Project Description & Plan | 15-06-18 | 20-06-18 | Good |
| M-002 | Requirement Definition | 21-06-18 | 27-06-18 | Good |
| M-003 | Project Design | 28-06-18 | 4-07-18 | Good |
| M-004 | Project Implementation | 5-07-18 | 11-07-18 | Good |
| M-005 | Project Status Presentation |  | 18-07-18 | Good |
| M-006 | Final Presentation & delivery |  | 25-07-18 | Excellent |

* 1. **Remarks**

|  |  |
| --- | --- |
| Remark ID | Description |
| R-001 | The weekly meetings with the supervisor were insightful. |
| R-002 | It was an exciting experience learning the R programming language. |

1. **Project Results**
   1. **Requirements**
      1. Requirements Compliance Matrix

|  |  |  |
| --- | --- | --- |
| ID | Requirement Description | Completed |
| WCA-1 | Team Seeding | Yes |
| WCA-1.1 | Select Teams | Yes |
| WCA-1.2 | Pot Teams | Yes |
| WCA-1.3 | Seed Teams | Yes |
| WCA-2 | Team Analysis | Yes |
| WCA-2.1 | Select a Team | Yes |
| WCA-2.2 | Retrieve team’s positions over last 4 years | Yes |
| WCA-2.3 | Calculate Team’s average position | Yes |
| WCA-2.4 | Map average position to tournament level | Yes |
| WCA-3 | Factor Evaluation | No |

*Completed: Yes (completely implemented)*

*No (not implemented at all)*

* + 1. Requirements Compliance Summary

|  |  |
| --- | --- |
| Total number of requirements | 10 |
| Number of requirements implemented | 9 |
| Requirements partially fulfilled | 0 |
| Requirements not fulfilled | 1 |
| Requirements dropped | 0 |

* + 1. Remarks

|  |  |
| --- | --- |
| Remark ID | Description |
| R-003 | We did not manage to do an evaluation of the factors used to do the FIFA Rankings because more than one data set is necessary. |

1. **Project Experiences**
   1. **Positive Experiences**

The main experience we learned from undertaking this project is team work. We also learned version control through having our repository on Github and the usefulness of data science.

* 1. **Improvement Possibilities**

We realised that if we could learn to work with more than one data set, the possibilities are endless.

1. **Financials**
   1. **Project Cost Summary**

|  |  |
| --- | --- |
| Planned Cost | 50,000 UGX |
| Actual Cost | 150,000 UGX |

1. **Metrics**
   1. **Milestone Metrics**

|  |  |  |
| --- | --- | --- |
| **Completed as Planned** | **Total** | **Timeliness** |
| 9 | 10 | Achieved |