

Master of Technology (IS)

FIFA 19 Classification Project

Project Report

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# Executive Summary

FIFA, also known as FIFA Football or FIFA Soccer, is a series of association football video games or football simulator, released annually by Electronic Arts under the EA Sports label. FIFA 19 data set comes from “<https://www.kaggle.com/karangadiya/fifa19>” which gets player information from “<https://sofifa.com/>”.

This project utilizes the several sklearn classifier algorithms to predict the FIFA 2019 player international reputation scores.

# Business Problem Background

EA Sports’ expensive and luxurious FIFA 19 is undoubtedly football games’ equivalent of the Premier League. The international reputation values the football game player, and it is important factor to consider when choosing game player. Therefore, the project provides ways to predict and realise the importance of international reputation score.

# Project Objectives & Success Measurement

We will utilize existing FIFA 19 dataset and predict international reputation scores with selected relevant feature set.

The measurement for the project will depends on the prediction accuracy on the test data, and it should achieve 95% average accuracy or more to be success.

# Project Solution Design

The project should prepare the dataset with sample size greater than 3000, then select the sklearn classifiers and conduct the training, finally perform the verification of the training result according to average accuracy.

The project follows the supervised learning process as below.

# Project Implementation

The project performs the steps below.

1. Row Data Collection
2. Pre-Processing
3. Sampling
4. Training Learning Algorithms
5. Hyper-parameter Optimization
6. Post-Processing
7. Final Classification Model

# Project Performance & Validation

The project performance is measured as the time required for the validation process. The required time for processing 2000 records takes less than 1 second, so this is acceptable for the project requirement.

The average accuracy is 97.18% which is much better than the project success target 95%, so the project target achieves the project goal.

# Project Conclusions: Findings & Recommendation