# PUBG GAME DATA ANALYSIS AND PREDICTION

# YANG CAO

ABSTRACT. With the rise of e-sports games, data analysis plays an increasingly important role. PUBG has taken the world by storm with its diverse playability. As a shooting game, players can move, supply, and shoot in the map to obtain higher terms. This paper uses different models to predict the final ranking based on different game data. Finally, the linear regression model was used to obtain 0.015303007019988265 test MSE.

Contents

 $Date \colon ({\rm None}).$ 

 $<sup>2020\</sup> Mathematics\ Subject\ Classification.$  Artificial Intelligence. Key words and phrases. Machine Learning, data visualization, prediction.

Thanks to all members of TULIP...

### 1. Introduction

In a PUBG game, up to 100 players start in each match (matchId). Players can be on teams (groupId) which get ranked at the end of the game (winPlacePerc) based on how many other teams are still alive when they are eliminated. In game, players can pick up different munitions, revive downed-but-not-out (knocked) teammates, drive vehicles, swim, run, shoot, and experience all of the consequences—such as falling too far or running themselves over and eliminating themselves. Different game behaviors will lead to different final rankings, so the main purpose is to build a model to predicts players' finishing placement based on their final stats, on a scale from 1 (first place) to 0 (last place).

In this paper, we show that how to use the different game actions to predict the final win places. It can help game player to get higher rank and help game data analyst to get higher correlation actions to help prefessional player to get better win places in the competition.

- e.g., First ...
- e.g., Second ...
- e.g., Third ...

The remainder of this paper is structured as follows: In Section 2, data preprocess will remove all the missing value. In section 3, data visualization will show the different game type proportion and relationship between two attributes. In Section 4, use linear regression and decision tree to build model and predict.

For ??, as shown below:

$$(1.1) a = b \times \sqrt{ab}$$

The quick brown fox jumps over the lazy dog. Jackdaws love my big Sphinx of Quartz. Pack my box with five dozen liquor jugs. The five boxing wizards jump quickly. Sympathizing would fix Quaker objectives.

$$\bar{x} = \frac{1}{n} \sum_{i=1}^{i=n} x_i = \frac{x_1 + x_2 + \dots + x_n}{n}$$

Many-wived Jack laughs at probes of sex quiz. Turgid saxophones blew over Mick's jazzy quaff. Playing jazz vibe chords quickly excites my wife. A large fawn jumped quickly over white zinc boxes. Exquisite farm wench gives body jolt to prize stinker.

$$\int_0^\infty e^{-\alpha x^2} dx = \frac{1}{2} \sqrt{\int_{-\infty}^\infty e^{-\alpha x^2}} dx \int_{-\infty}^\infty e^{-\alpha y^2} dy = \frac{1}{2} \sqrt{\frac{\pi}{\alpha}}$$

Jack amazed a few girls by dropping the antique onyx vase! The quick brown fox jumps over the lazy dog. Jackdaws love my big Sphinx of Quartz. Pack my box with five dozen liquor jugs. The five boxing wizards jump quickly.

$$\sum_{k=0}^{\infty} a_0 q^k = \lim_{n \to \infty} \sum_{k=0}^{n} a_0 q^k = \lim_{n \to \infty} a_0 \frac{1 - q^{n+1}}{1 - q} = \frac{a_0}{1 - q}$$

Sympathizing would fix Quaker objectives. Many-wived Jack laughs at probes of sex quiz. Turgid saxophones blew over Mick's jazzy quaff. Playing jazz vibe chords

quickly excites my wife. A large fawn jumped quickly over white zinc boxes.

$$x_{1,2} = \frac{-b \pm \sqrt{b^2 - 4ac}}{2a} = \frac{-p \pm \sqrt{p^2 - 4q}}{2}$$

Exquisite farm wench gives body jolt to prize stinker. Jack amazed a few girls by dropping the antique onyx vase! The quick brown fox jumps over the lazy dog. Jackdaws love my big Sphinx of Quartz. Pack my box with five dozen liquor jugs.

$$\frac{\partial^2 \Phi}{\partial x^2} + \frac{\partial^2 \Phi}{\partial y^2} + \frac{\partial^2 \Phi}{\partial z^2} = \frac{1}{c^2} \frac{\partial^2 \Phi}{\partial t^2}$$

The five boxing wizards jump quickly. Sympathizing would fix Quaker objectives. Many-wived Jack laughs at probes of sex quiz. Turgid saxophones blew over Mick's jazzy quaff. Playing jazz vibe chords quickly excites my wife.

### 2. Preliminaries

A large fawn jumped quickly over white zinc boxes. Exquisite farm wench gives body jolt to prize stinker. Jack amazed a few girls by dropping the antique onyx vase! The quick brown fox jumps over the lazy dog. Jackdaws love my big Sphinx of Quartz.

GLi: Gang Li has worked up to here.

# 3. Метнор

Pack my box with five dozen liquor jugs. The five boxing wizards jump quickly. Sympathizing would fix Quaker objectives. Many-wived Jack laughs at probes of sex quiz. Turgid saxophones blew over Mick's jazzy quaff.

- First item in a list
- Second item in a list
- Third item in a list
- First item in a list
- Second item in a list
- Third item in a list
- Fourth item in a list
- Fifth item in a list
- (1) First item in a list
- (2) Second item in a list
- (3) Third item in a list
- (4) Fourth item in a list
- (5) Fifth item in a list

First: item in a list Second: item in a list Third: item in a list Fourth: item in a list Fifth: item in a list

QWu: Qiong Wu has worked up to here.

Table 1. Precision Comparison on Event Detection Methods

|           | OR Event Detection | AC Event Detection | TC Event Detection |
|-----------|--------------------|--------------------|--------------------|
| precision | 0.83               | 0.69               | 0.46               |
| recall    | 0.68               | 0.48               | 0.36               |
| F-score   | 0.747              | 0.57               | 0.4                |

### 4. Experiment and Analysis

### 5. Conclusions

Playing jazz vibe chords quickly excites my wife. A large fawn jumped quickly over white zinc boxes. Exquisite farm wench gives body jolt to prize stinker. Jack amazed a few girls by dropping the antique onyx vase! The quick brown fox jumps over the lazy dog.

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