PubG prediction player skill by Regression Model

Team name and Team member information (fname,lname, sid)

IO team
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Introduction & background

PubG is a battle royale shooter that pits 100 players against each other in a struggle for survival. Problem is how do we know abilities or skill developing of players, that is the origin of this research. To increase investment of E-sport player we would like to know how to be advantage in competition. To Predict the skill of players in solo mode and team mode by percentage.

Identify stakeholders (if any)

Business investor
PubG players
E-sports industry

Related works (2-3 similar works)
https://www.kaggle.com/razamh/pubg-dataset (Data source)
https://www.kaggle.com/razamh/pubg-exploratory-data-analysis-eda (Data EDA)

Apply DS process / DS tasks to the problem / Simple framework by Crisp DM

Business Understanding

Find out solution to win a PubG game following by theory, high level shooting technic or new meta weapon and ability which match to teammate. Therefore, we may send the top of PubG player to E-sport team to competitive the next PubG world competition 2022.

Data Understanding

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.

You are provided with a large number of anonymized PUBG game stats, formatted so that each row contains one player's post-game stats. The data comes from matches of all types: solos, duos, squads, and custom; there is no guarantee of there being 100 players per match, nor at most 4 players per group.

Data preparation

Examination missing value in data
Remove outliers or extreme values
Data reduction/Duplication
Data Transformation in category feature / handling the numerical data
Decide data for datamining/machine learning data is huge (1,048,576 rows).

Modeling

We try to use data mining method by prediction in Linear regression compares with Polynomial regression (at best X degree), Multiple linear regression (MLR) and compare result of modelling linear regression difference 2 types comparison.

Evaluation

Predict result of Win-percentage actual and prediction (accuracy rate)
R2 Model score
Mean Absolute Error
Mean Squared Error
Root Mean Square Error

Deployment

Create dashboard or summaries paper to provide a result to PubG player. Create E-sport team for business investor that interested in game business.

Expected Activities(s) Outputs/Outcome (if any)

Activities	Outputs	Outcome
Increase player skill	Win rate ratio	Consistency of play skill base on high level technic
Increase investment in E-sport	Number of investors in E-sport industry	Proportion of E-sport industry and others industry
Send PubG play to world competitive	Participate world competitive	Win the world competition

Action Plan: Separate duties from domain skill and perform task follow table as below.

Activities/Task procedure	PubG skill players prediction												Responsible person
	Days												
	1	2	3	4	5	6	7	8	9	10	11	12	
Data Preparation / EDA													Sornram S.
Data Modelling / Test													Nattawat W.
Data Visualization / Report													Nuttawut T.
Conclusion/Summary Project													Team
Presentation													Team