

An Analytical Approach for Bot Cheating Detection in a Massive Multiplayer Online Racing Game

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Potential
of One

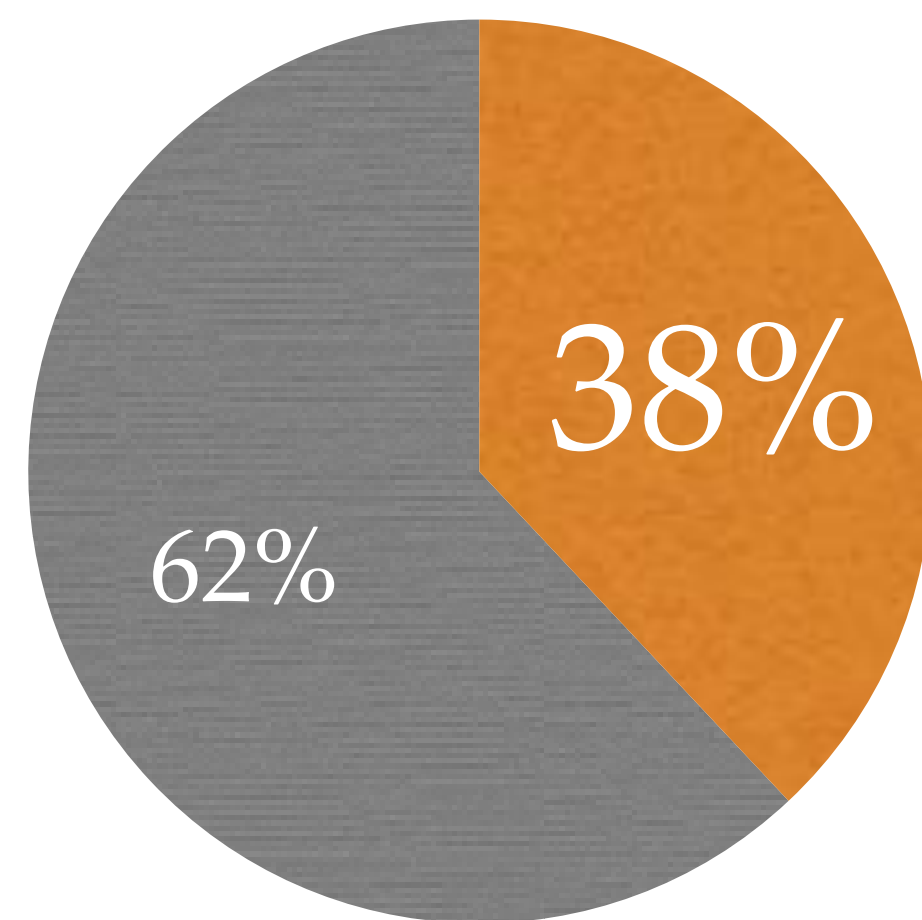
Power
of
AI

The videogame industry



Generated nearly \$25 billion in revenue worldwide in 2011

Strong growth has been seen during the past years



Online games revenues will account for more than 38% of total video game software revenues by 2013

Massive multiplayer online games (MMOG)



Popular sector within the videogame industry



Human players compete against others in a virtual world



Virtual currency that allows players to buy items

MMOG cheating

- Affects the trust that honest players have in the game
- Reduces their satisfaction on playing the game
- Reduces revenue for the game producers



Objective

Develop a methodology that will identify **cheaters** in a massive multiplayer **online racing game**, who are using **bots** to gain an unfair advantage over other players.

Background information – Data

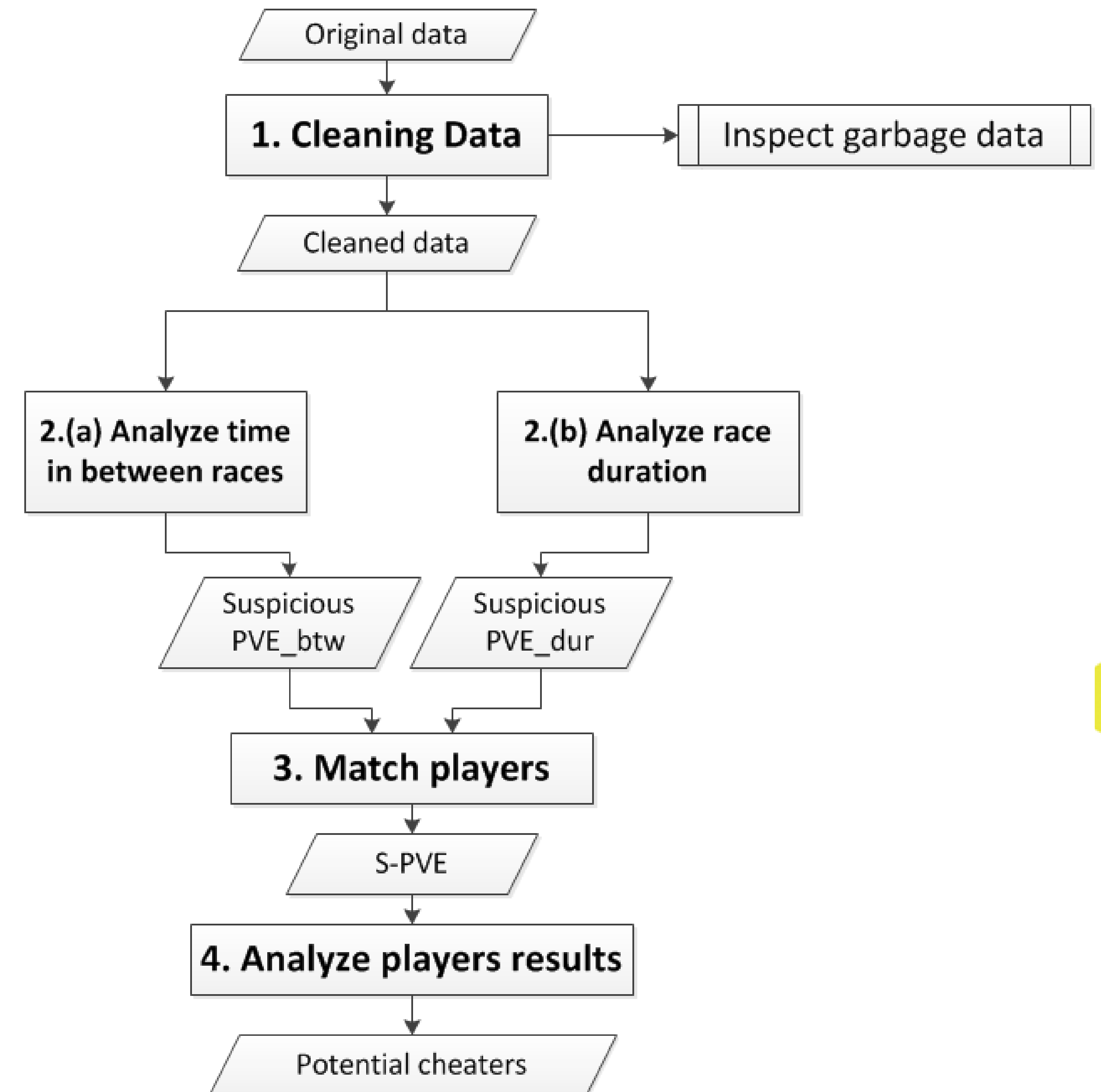


The data for this work comes from a racing multiplayer online game. The dataset in this work contained a total of **2.2 million observations** for 45,457 distinct players.

Data Analysis

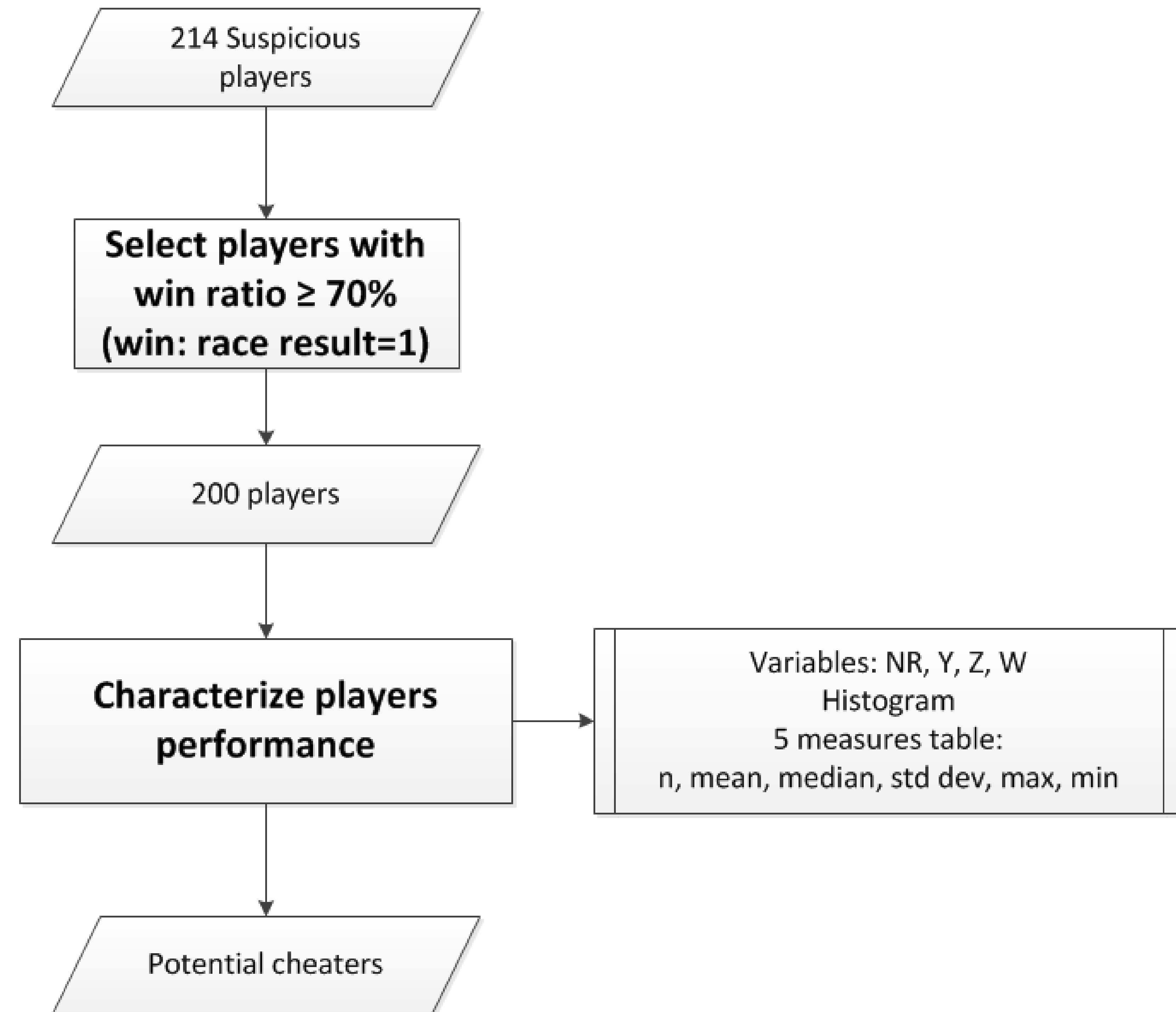


Players with a winning ratio greater than 70% are selected in the dataset obtained in step 4.

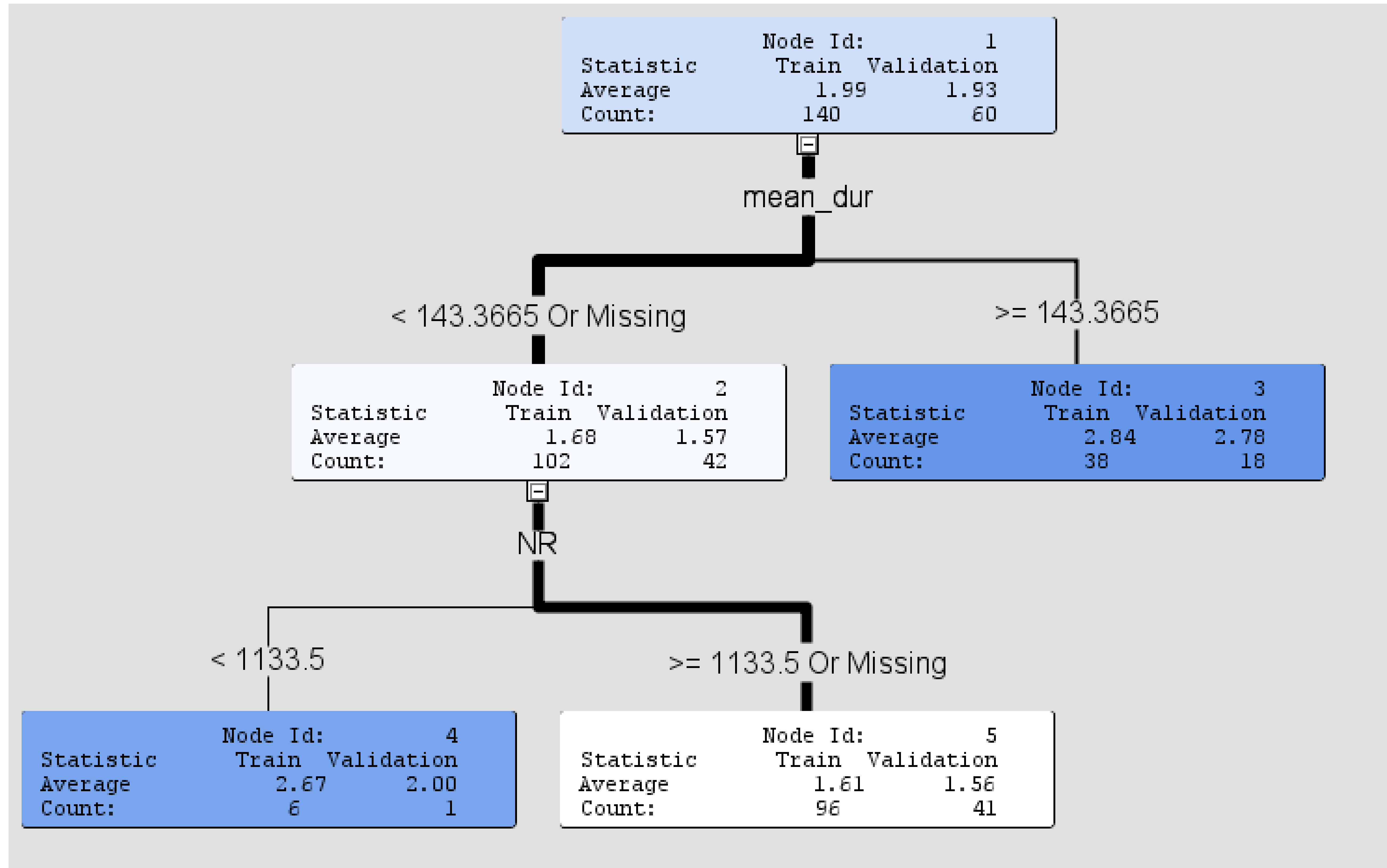


Results

In total, 200 players had a winning ratio greater than 70%. A decision tree is used to characterize the data of the 200 players, and to understand their behavior within their group.



Results





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