Flex scores – Find where the action is

Team: *Force of Mortality*

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What can be improved?

Engaging users using data-centric broadcasts

- Develop a ***real-time scoring metric*** which indicates chances of a good finish

- ***Increased engagement*** with streaming viewers

- **Identifying top performers** within a given match provides a way to assess performance within a game

- Leverage **historical player performance + current match events** to evaluate overall performance
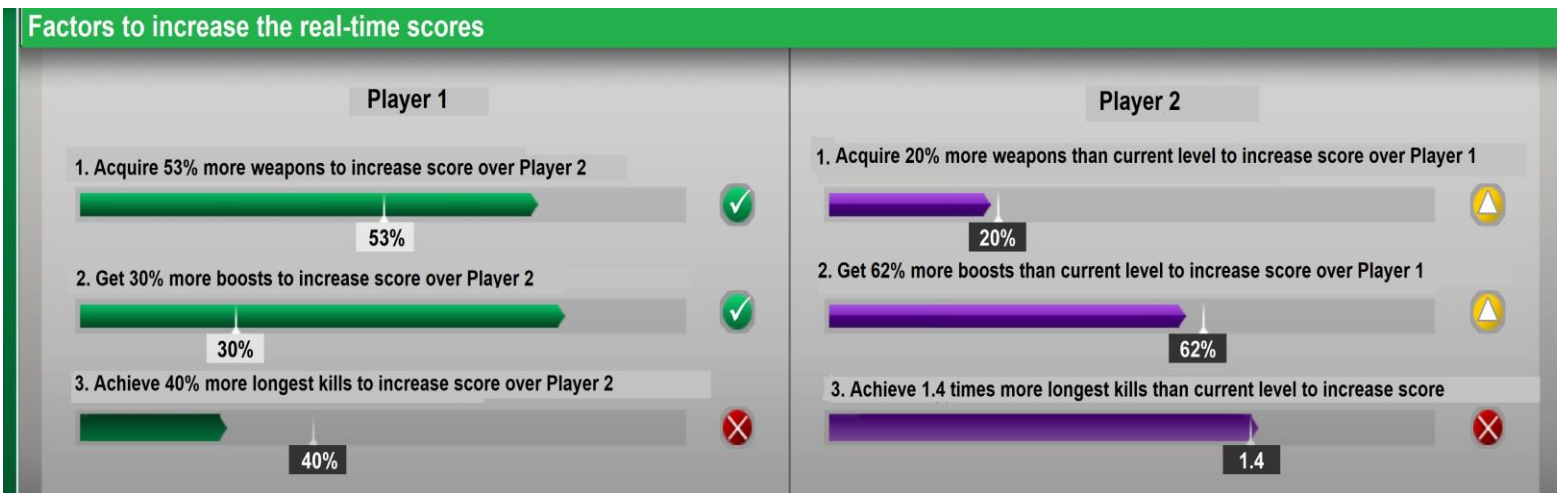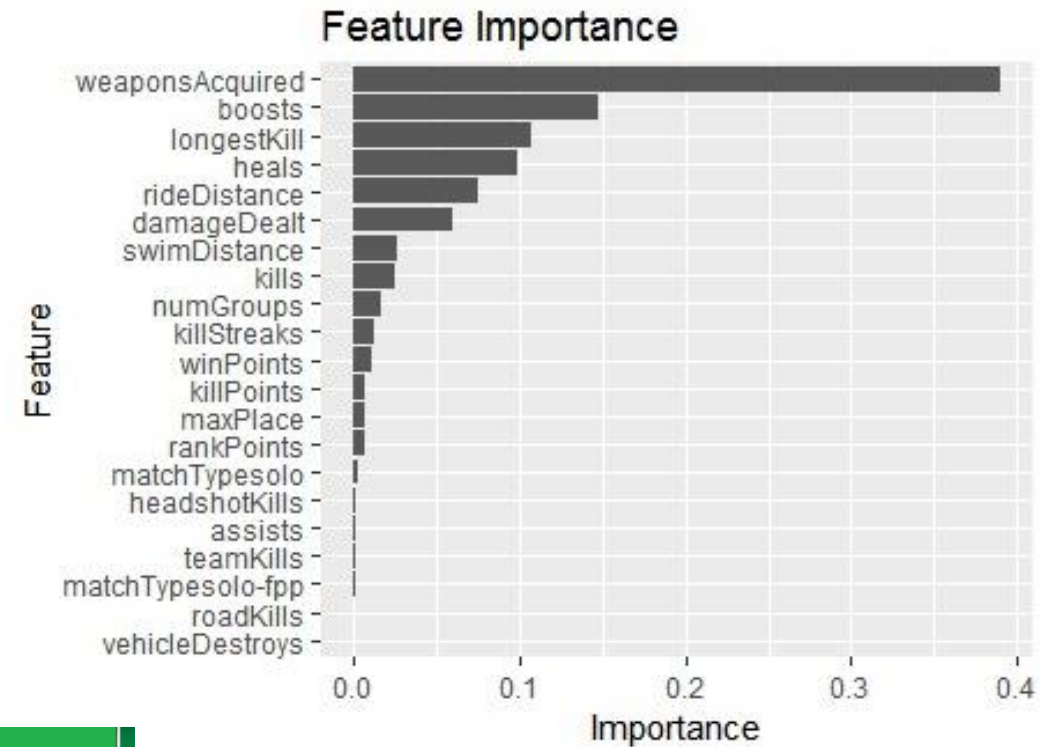
Approach

We *followed a 3-stage process* to come up with the real-time scores:

1. Use *historical aggregated matches' data* from PUBG to identify **which metrics drive success** for a player

2. Use **play-by-play information from the PUBG APIs** to train a model on the current matches data to come up with a **real-time score**

3. **Combine the historical + real-time scores** to identify the top-performers in a live match to **drive viewer engagement**

What impacts the score

- Identified key factors that cause score to increase

- We show which factors will increase real-time scores

- Betters will find this feature useful

Feature Importance

Factors to increase the real-time scores

Player 1

1. Acquire 53% more weapons to increase score over Player 2

53% ✓

2. Get 30% more boosts to increase score over Player 2

30% ✓

3. Achieve 40% more longest kills to increase score over Player 2

40% ✗

Player 2

1. Acquire 20% more weapons than current level to increase score over Player 1

20% ⚠

2. Get 62% more boosts than current level to increase score over Player 1

62% ⚠

3. Achieve 1.4 times more longest kills than current level to increase score
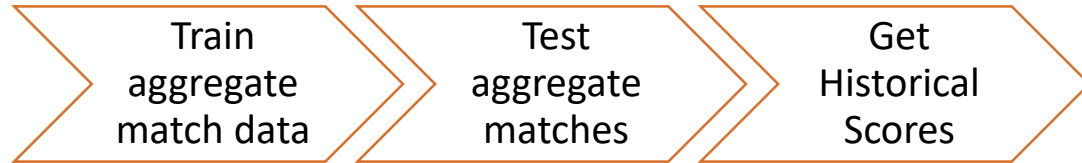
1.4 ✗

Methodology

- Train a historical performance model using aggregated player-match data

- Identify important metric drivers which define player success

- Pre-process, pre-process & pre-process to extract the useful information from the resulting JSONs

- Iteratively train the play-by-play model as and when new events like kills, damage events & revives happen

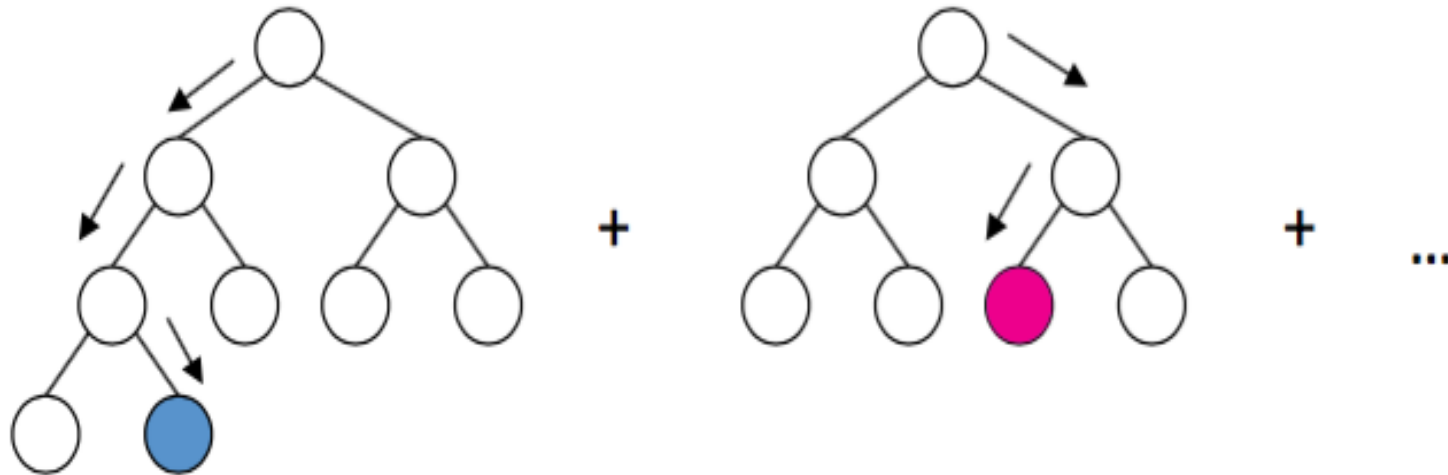- Aggregate historical and real-time scores for a given live test match

Technical Aspects

Train aggregate match data → Test aggregate matches → Get Historical Scores

XG-Boost

40k matches
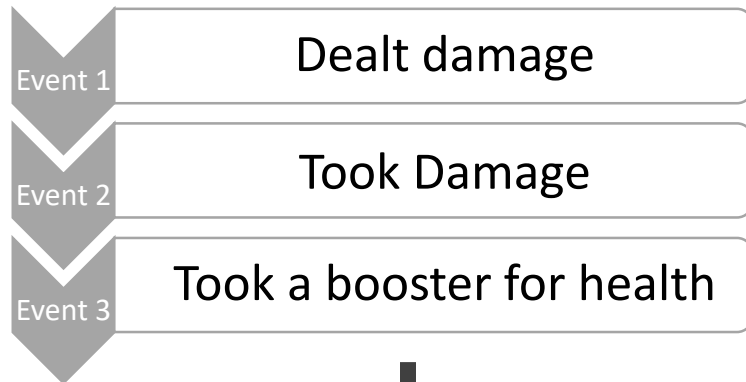500k players

20k matches
200k players

Sample of real-time score visualization

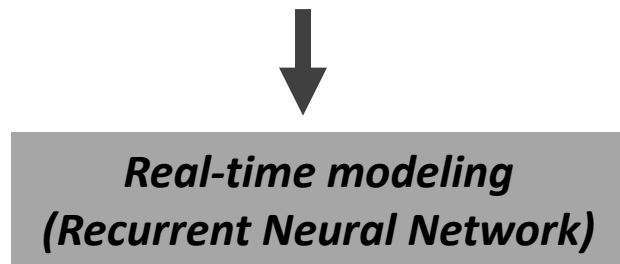Sliders showing the scores of top players in the bottom left

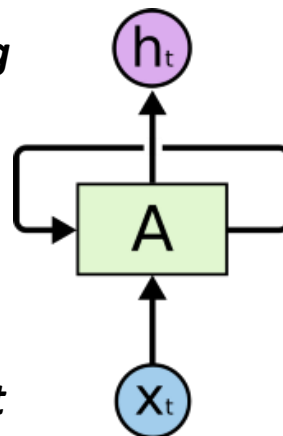Real-time indication of performance in live coverage

Technical Aspects

Event 1	Dealt damage
Event 2	Took Damage
Event 3	Took a booster for health

Event timeline

Real-time modeling (Recurrent Neural Network)

Modeling

Live match scores for players

Output

h_t

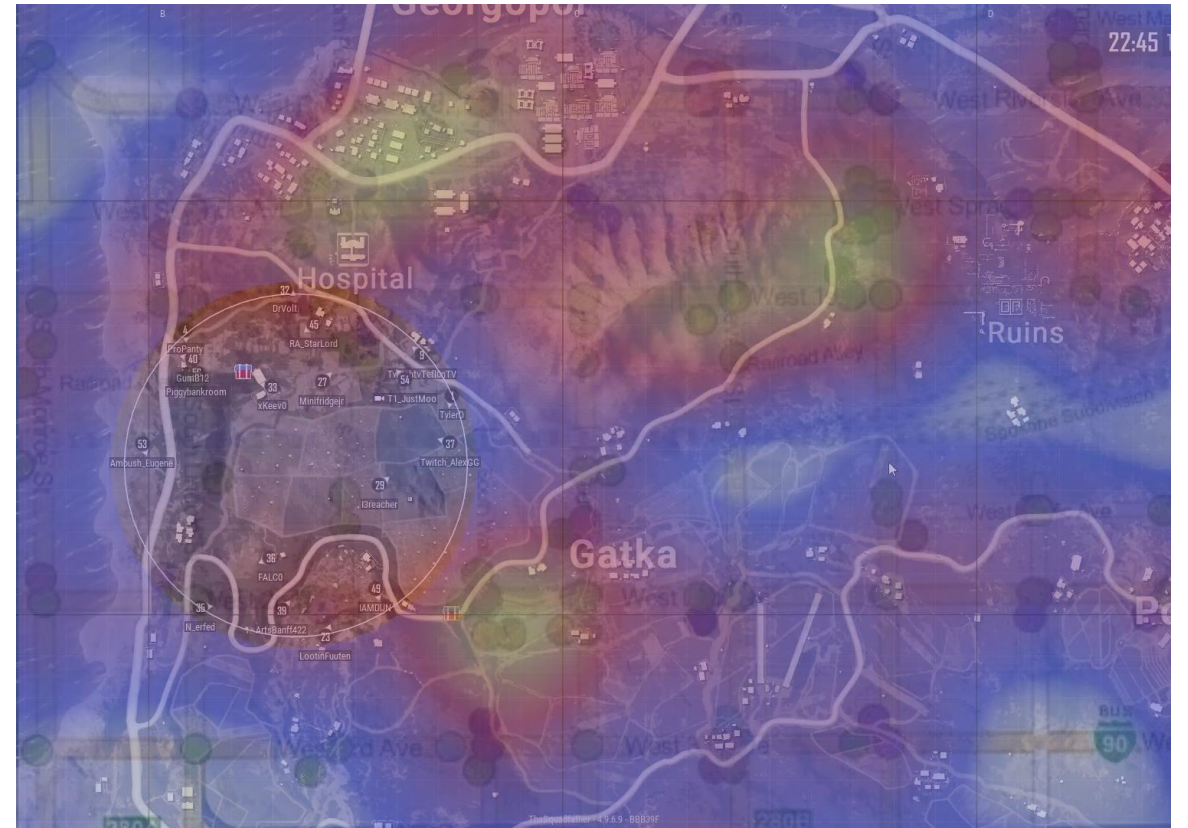A

x_t

PLAYERUNKNOWN'S
BATTLEGROUNDS

Innovations

- Use **play-by-play events data** to capture what is happening and use it to come up with a **real-time scoring system** which lets you know who is performing well in a live match

- We also use historical match data to influence our **final score** for the current match

Heatmap of player scores overlaid on map

- Allow commentator to show heat map of real-time scores overlaid on regular map

- Enable commentator to zoom in on key areas rather than showing random areas over streaming

Data Insights

- **Player events** during a match are *a rich source of information* that should be mined during the match

- In addition to serving as player performance indicators, they can also help give interesting statistics for the match which help engage with the users

- The data insights make friendly conversations between viewers during real-time screening of matches and creates good social impact

Thank you!