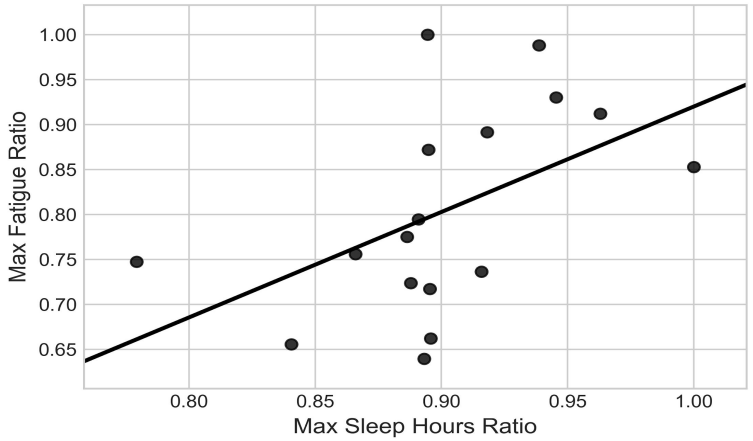
Physics of Women's Rugby Sevens

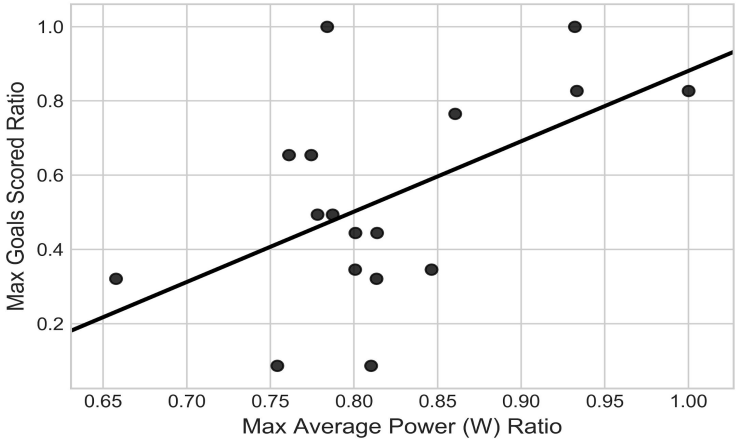
Newton's Knights

DataFest 2019

03/31/19

Data Exploration/Assumption Verification



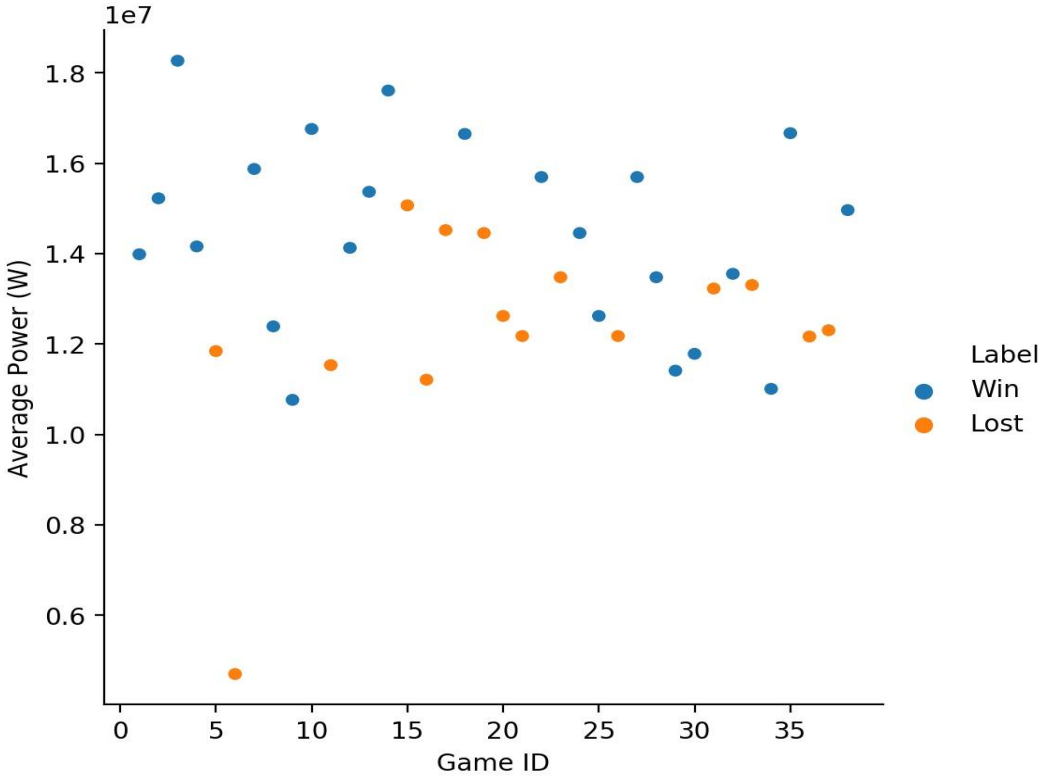


Plot of Max Goals Scored Ratio vs Max Average Power suggests that the more power exerted by the players in their games results in increasing the likelihood of scoring more goals in the respective game.

Due to the correlation between fatigue and sleep hours, and fatigue and power, we can relate max goals scored back to sleep hours and confidently suggest that players should maximize their sleep to maximize their goals scored.

Feature Extraction

- Average power of team calculated
  - Calculated from average team distance and average force on player
  - Used GPS data to calculate average force.



Machine Learning/Future Work

- Hierarchical clustering of player roster
  -Exposes relation of games with similar rosters
  -Possible relation of repeated rosters in tournament degrading performance
- Single Vector Machine
  -Problems with over-fitting
  -insufficient parameters
- Creation of modified RPE data set based on games and players in game

