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Weekly Report #4

I’ve narrowed down my research to two main topics and will be delving into the EDA and modeling of them in the coming weeks.

1. Load Management in the NBA:

Load management int the news and research (motivation):

<https://www.espn.com/nba/story/_/id/28066201/nba-load-management-know-know>

<https://www.sbnation.com/nba/2019/11/8/20954096/load-management-definition-kawhi-leonard-lebron-james-fines-controversy>

<https://www.forbes.com/sites/evandammarell/2019/12/16/theres-a-possible-solution-for-the-nba-load-management-and-fan-perception/#68a87ae57b9d>

<https://www.cbssports.com/nba/news/nba-says-teams-using-load-management-designation-to-sit-players-will-be-in-violation-of-league-resting-policy/>

<https://www.gq.com/story/nba-load-management>

<https://clutchpoints.com/3-ways-the-nba-can-fix-its-load-management-issue/>

<https://www.deseret.com/indepth/2019/12/20/21028285/load-management-nba-ratings-kawhi-leonard-lebron-james>

After all the confusion and controversy, there is one question that is begging to be answered for fans, coaches, and the administration of the NBA:

Does load management work? If so, how effective is it? Is the sacrifice in the short term worth it in the long term?

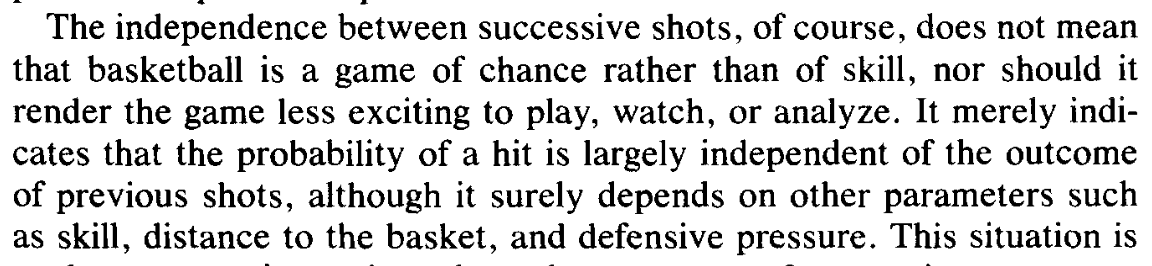
How can I make this question pertain to the field of machine learning and data science? I will hopefully figure this out soon and with some EDA it will come to me.

Budget for NBA Rest Day Schedule Data: About 30 dollars if I don’t try to web scrape. This is important data if I want to use the rest day data with the NBA Injury Data.

Also want to use average minutes played per game in previous 10 (or so) games before injury. Think about what other statistics to take into account.

Data: <https://www.nbastuffer.com/2019-2020-nba-rest-days-stats/>

2. NBA Shot Success. Looking into the success of the shot in the NBA in greater depth.

Further research on top of of Khaneman and his paper: <https://reader.elsevier.com/reader/sd/pii/0010028585900106?token=9DC2EEDEA2DB7BCDBE908B0A0997C15BDA6D2BE857E06CE526A01410CF8A306D8F27EEC17F5672A6B681B407B888C391>

Can we predict the success of an individual NBA shot and what goes into that calculation?

Use this data along with data from somewhere else? Think about what else I can add on to this data to help my neural network.

Data: <https://www.kaggle.com/dansbecker/nba-shot-logs>

Model type: Classification: Success or Fail. Binary classification of whether the shot will go in or not.

Additional Research about the shot in the NBA: Interpretability. Maybe make a decision tree and look into the biggest factors that affect the shot, and using these findings adjust strategies in the NBA to make more shots.

Further work: I will be uploading two ipynb’s onto Github prior to our meeting on Thursday @1PM with some EDA and modeling of both of these topics to try and determine if I should choose one path over the other.