CISC 451 – Course Project

Predicting Match Outcomes in Professional Ice Hockey – Midterm Report

October 22nd, 2020

Gavin McClelland – 10211444

Marshall Cunningham - 20249991

# Introduction and Problem Definition

- Brief discussion on parity in the NHL, why professional bookies can only do so well, and why there is such an appetite to explore this space

- Discuss how the initial approach was to explore game outcomes using event-driven data—specifically shot locations—but similar attempts in literature are much more sophisticated and are out of the scope of this project. More importantly, these previous approaches have been solely focused on determining the likelihood of a shot becoming a goal, instead of these micro-level events contributing to the outcome of a game.

# 2.0 Brief Dataset Description

- ERD

# 3.0 Assessment of Challenges and Obstacles

# 4.0 Project Management

- Gantt Chart

# 5.0 Methodology and Analytics Process

## 5.1 Software Packages and Download Instructions

All code written for this assignment was written in the Python programming language. The main software packages used in this assignment were numpy, pandas, and scikit-learn. An exhaustive list of dependencies can be downloaded by running the command “pip install -r requirements.txt” in the root directory of the submitted folder.

## 5.2 EDA

## 5.3 Preparation

## 5.4 Modeling

## 5.5 Other approaches explored

# 6.0 Evaluation of Work Completed

Refer to sprints outlined in Gantt chart. Literature review either here or in the intro section

## 6.1 Scope Definition

# 7.0 Future Work

# References

xG models (to support refined problem definition)

blog posts with their own predictive models

dataset