

Nifty Neato Bookdown

Based on the book and work of Yihui Xie

Your Name Here

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Contents

Chapter 1

Prerequisites

This is a *sample* book written in **Markdown**. You can use anything that Pandoc's Markdown supports, e.g., a math equation $a^2 + b^2 = c^2$.

The **bookdown** package can be installed from CRAN or Github:

```
install.packages("bookdown")  
# or the development version  
# devtools::install_github("rstudio/bookdown")
```

Remember each Rmd file contains one and only one chapter, and a chapter is defined by the first-level heading #.

To compile this example to PDF, you need XeLaTeX. You are recommended to install TinyTeX (which includes XeLaTeX): <https://yihui.org/tinytex/>.

Learn more about bookdown <https://bookdown.org/yihui/bookdown>

Chapter 2

Introduction

Pace-of-play is an important characteristic in possession-based / team-based sports that can heavily influence the style and outcome of a match. In soccer, pace-of-play has been defined as the number of shots taken or total number of successful passes per game. The main limitation of event-based pace metrics is that they fail to appropriately account for the circumstances under which they are performed. For example, the total number of successful passes does not differentiate between a pass made between two defenders in their own half and a pass from a winger trying to create a goal-scoring opportunity.

Pace-of-play has also been measured as the distance covered over time within a team's possessions. However, short possessions do not provide an accurate measurement of pace. For example, a possession consisting of a goal kick and a pass may travel at a fast speed, but does not contribute to a team's overall pace.

The aim of this work is to analyze pace-of-play for possessions that consist of three or more pass or free kick events, as these types of events are more definitive of a team's pace. The use of spatio-temporal event data allows for more granular measurements of pace-of-play, such as measures of speed between consecutive events and between different regions on the pitch.

In addition, we seek to build a model using these metrics (add more when we get to modeling).

Our research goals are three-fold: Examine how pace-of-play varies across the pitch, between different players and across different professional leagues. Quantify variations in pace at the player and team level and provide metrics to assess how well players and teams attack/defend pace. Evaluate effectiveness of pace metrics by incorporating them into models that predict the outcome of a match.

Our results show that pace is _____, and are good/bad variables when predicting the outcome of a match.

The remainder of this paper is organized as follows. Section 2 discusses the related work that analyzes pace-of-play in soccer and other team sports and Section 3 describes the dataset / datasets. Section 4 introduces the pace-of-play metrics and the modeling methods. Section 5 presents the results of the methodology. Sections 6 and 7 provide a discussion of our findings and a conclusion, respectively.

Chapter 3

Literature

Here is a review of existing methods.

