Research Article

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Home Sweet Home Field Advantage:

Examination at Sport, League, and Club Levels

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Abstract: From 2001 to 2017 seasonal data

Keywords: European Professional Soccer Leagues, Home Field Advantage, Poisson generative process

1 Introduction

The popular frequentist (Fisherian) statistical inference process starts with the formulation of an alternative research hypothesis(Ha), such as "people with higher income live happier than low income earners", which is typically set up against a null non-effect hypothesis (Ho), such as "income level has no effect on happiness". Then researchers collect relevant data (each subject's perceived happiness and income), and conduct a statistical. (Gajewski, 2006)

A second motivator for this study is related to the hotly debated topic of home field advantage in soccer competition. The contributions we made in this paper are (1) highlighting the different generative process underlying most sports performance metrics and suggesting corresponding solutions. (2) refuting the long and firmly held belief of HFA: (3) contrasting the Bayesian and the frequentist approaches to statistical inference in answering the the same research question and using the same data.

Fig. 1: Bias - Accuracy Scatter Plot

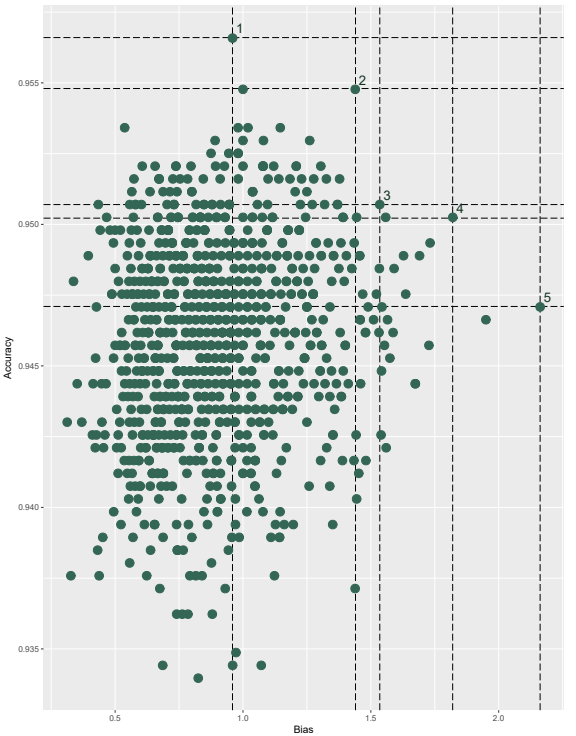
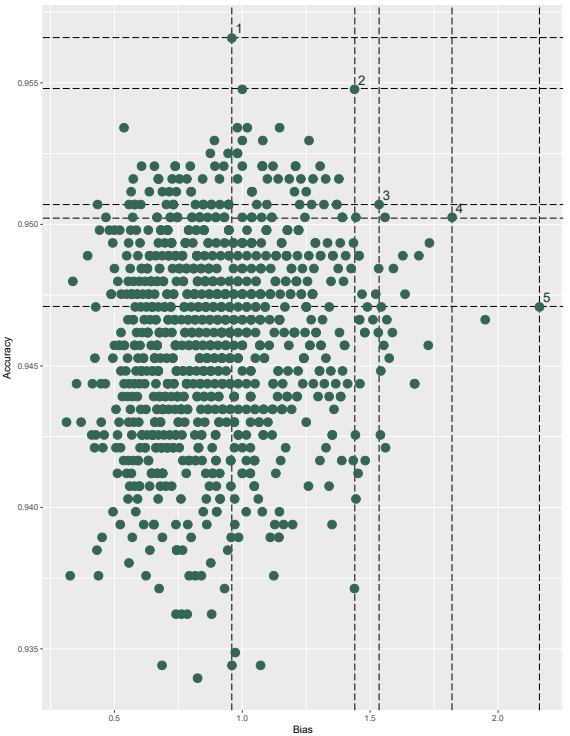


Fig. 2: Bias - Accuracy Scatter Plot



Tab. 1: Descriptive Statistics

	Mean	Median	Std. Dev.	Min.	Max.	Skewness	Kurtosis
MHG	3.634	4	1.676	0	9	0.246	0.034
MAG	2.884	3	1.676	0	10	0.627	0.786

2 Review of Literature

2.1 Data and Analyses

2.2 Sources

Acknowledgment: We would like to thank ESPN FC for compiling the season-level club performance data and allow public access.

References

Gajewski, B. J. (2006). There's no place like home: Estimating intra-conference home field advantage in college football using a bayesian piecewise linear model. *Journal of Quantitative Analysis in Sports*, 2(1).

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