Prediction isn't everything, but everything is prediction

Abstract

Write an abstract

Keywords: prediction; explanation; OTHER KEYWORDS?????

1 Introduction

2 Everything is prediction

2.1 Why is everything prediction?

- Strong claim: everything (or more or less everything) in inferential statistics can be re-framed through lens of prediction!

- Explanation via prediction

- Goal of Bayesian modeling should NOT be to find posterior, but rather to find posterior predictive distribution

- Parameters don't exist, must connect to observables

- Even model checking/development can be viewed as prediction exercises (prior pred checks, posterior pred checks)

2.2 Examples (especially including potential objections)

- Hypothesis testing (Billheimer 2019 example)

- Ability estimation (e.g., IRT)

- Treatment effect estimation

- Causal inference

- What else?

3 Prediction isn't everything

- Don't worry statisticians, we don't only care about prediction

- We still care about understanding how a model works, not just predictive accuracy

- Etc.

4 Discussion

Discuss

SUPPLEMENTARY MATERIAL

5 Open points

By reviewing the blog post and the comments:

- Don Rubin actually wrote something about the missing data-approach? Ask Andrew

- Paul Harrison. "prediction is something out of the knowledge of the statistician". Be careful with the definition.

- Christian Hennig comment: everything can be seen from a predictive perspective, even when we do not care about prediction