

spbook

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Preface

This is a Quarto book.

To learn more about Quarto books visit <https://quarto.org/docs/books>.

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Part I

Introduction

1 Introduction

I believe the idea with this was to have something somewhat similar to the R package book: showing some of the big picture stuff of an analysis.

2 Spatial Data Exploration

building from https://highamm.github.io/spmodel_intro/data-exploration.html

3 Spatial Covariance and Correlation

building from https://highamm.github.io/spmodel_intro/spatial-covariance.html

4 Spatial Data in R

location of this chapter might change, but would contain info on handling spatial data in R: sf objects, coordinate reference systems, etc.

Part II

Modeling Point Data

5 Linear Model with Independent Errors

review of non-spatial linear models.

6 Spatial Linear Model

building from https://highamm.github.io/spmodel_intro/point-modeling.html and https://highamm.github.io/spmodel_intro/model-assumptions.html

7 Prediction

building from https://highamm.github.io/spmodel_intro/prediction.html

8 Model Building

general model building stuff, along with cross-validation.

Part III

Spatial GLMs

9 Spatial Logistic Regression

can build off of https://highamm.github.io/spmodel_intro/logistic-modeling.html

10 Spatial Models for Counts

11 Spatial GLMs

(more general framework for glms).

Part IV

Areal Data

12 Areal Data

can build from https://highamm.github.io/spmodel_intro/areal-modeling.html

Part V

Other

13 Catch All

This is just a place to put things that don't belong in a specific chapter right now. Things that we have discussed include:

catch-all chapter (non-spatial random effects, anisotropy, fixing spatial parameters, simulation, big data, spatial confounding)

14 Applications

This is a place to put any ideas for specific “application” chapters, should we decide to go that route.