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1 Introduction

This book aims to be a complement to the 2nd edition <u>An Introduction to Statistical Learning</u> book with translations of the labs into using the <u>tidymodels</u> set of packages.

The labs will be mirrored quite closely to stay true to the original material.

Edition Differences

All listed changes will be relative to the 1st edition.

- Naive Bayes has been added to chapter 4 on <u>Classification</u>
- Poisson Regression has been added to chapter 4 on Classification
- "Application to Caravan Insurance Data" section is no longer treated as its own section and is now part
 of the <u>K-Nearest Neighbors</u> section
- <u>Bayesian Additive Regression Trees</u> has been added to chapter 8 on <u>Tree-Based Methods</u>
- chapter on <u>Unsupervised Learning</u> has been renumbered to chapter 12 instead of 10
- Matrix Completion has been added to chapter 12 on <u>Unsupervised Learning</u>
- chapter on <u>Deep learning</u> has been added as chapter 10
- chapter on <u>Survival Analysis and Censored Data</u> as been added as chapter 11
- chapter on <u>Multiple Testing</u> as been added as chapter 13

Colophon

This book was written in <u>RStudio</u> using <u>Quarto</u>. The <u>website</u> is hosted via <u>GitHub Pages</u>, and the complete source is available on <u>GitHub</u>.

This version of the book was built with R version 4.2.1 (2022-06-23) and the following packages:

package	version	source
broom	1.0.4	CRAN (R 4.2.0)
corrr	0.4.4	CRAN (R 4.2.0)
dials	1.1.0	CRAN (R 4.2.0)
discrim	1.0.1	CRAN (R 4.2.0)

package	version	source
downlit	0.4.2	CRAN (R 4.2.0)
dplyr	1.1.0	CRAN (R 4.2.0)
factoextra	1.0.7	CRAN (R 4.2.0)
ggplot2	3.4.1	CRAN (R 4.2.0)
glmnet	4.1-6	CRAN (R 4.2.1)
infer	1.0.4	CRAN (R 4.2.1)
ISLR	1.4	CRAN (R 4.2.0)
ISLR2	1.3-1	CRAN (R 4.2.0)
kernlab	0.9-32	CRAN (R 4.2.0)
kknn	1.3.1	CRAN (R 4.2.0)
klaR	1.7-1	CRAN (R 4.2.0)
MASS	7.3-57	CRAN (R 4.2.1)
mclust	6.0.0	CRAN (R 4.2.0)
modeldata	1.1.0	CRAN (R 4.2.0)
paletteer	1.5.0	CRAN (R 4.2.0)
parsnip	1.0.4	CRAN (R 4.2.0)
patchwork	1.1.2	CRAN (R 4.2.0)
proxy	0.4-27	CRAN (R 4.2.0)
purrr	1.0.1	CRAN (R 4.2.0)
randomForest	4.7-1.1	CRAN (R 4.2.0)
readr	2.1.4	CRAN (R 4.2.0)
recipes	1.0.5	CRAN (R 4.2.0)
rpart	4.1.16	CRAN (R 4.2.1)
rpart.plot	3.1.1	CRAN (R 4.2.0)
rsample	1.1.1	CRAN (R 4.2.0)

package	version	source
scico	1.3.1	CRAN (R 4.2.0)
tibble	3.2.1	CRAN (R 4.2.1)
tidyclust	0.1.2	CRAN (R 4.2.0)
tidymodels	1.0.0	CRAN (R 4.2.0)
tidyr	1.3.0	CRAN (R 4.2.0)
tune	1.0.1	CRAN (R 4.2.0)
vip	0.3.2	CRAN (R 4.2.0)
workflows	1.1.3	CRAN (R 4.2.0)
workflowsets	1.0.0	CRAN (R 4.2.0)
xgboost	1.7.3.1	CRAN (R 4.2.0)
yardstick	1.1.0	CRAN (R 4.2.0)