

ISLR Notes

TBD

2021

Contents

About	5
1 Introduction	7
1.1 An Overview of Statistical Learning	7
1.2 A Brief History of Statistical Learning	7
1.3 Other Considerations	7
2 Statistical Learning	9
3 Linear Regression	11
4 Classification	13
5 Resampling Methods	15
6 Model Selection and Regularization	17
7 Moving Beyond Linearity	19
8 Tree Based Methods	21
9 Support Vector Machines	23
10 Unsupervised Learning	25

About

Notes and solutions for the exercises in the book: *An Introduction to Statistical Learning with Applications in R (1st edition)* by Gareth James, Daniela Witten, Trevor Hastie, and Robert Tibshirani (website: <https://www.statlearning.com/>)

License

This work, as a whole, is licensed under a Attribution-NonCommercial-ShareAlike 4.0 International License

Chapter 1

Introduction

1.1 An Overview of Statistical Learning

“Statistical learning refers to a vast set of tools for understanding data.”

- Supervised: Using statistical models to **predict** or **estimate outputs** based on **inputs**.
- Unsupervised: Same as above but without outputs.

1.1.1 Datasets Examples

- Wages
- Stock Market Data
- Gene Expression Data

1.2 A Brief History of Statistical Learning

Etc, etc old white guys.

1.3 Other Considerations

"How Eugenics Shaped Statistics: Exposing the damned lies of three science pioneers.

Chapter 2

Statistical Learning

Chapter 3

Linear Regression

Chapter 4

Classification

Chapter 5

Resampling Methods

Chapter 6

Model Selection and Regularization

Chapter 7

Moving Beyond Linearity

Chapter 8

Tree Based Methods

Chapter 9

Support Vector Machines

Chapter 10

Unsupervised Learning