## Introduction to R and RStudio for Statistics Courses

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#### Contents

1	Why R and RStudio?	5
2	Installing R and RStudio2.1Installing R2.2Installing RStudio	7 7 7
3	A Tour of R and RStudio	9
4	R As a Statistical Programming Language	11
5	Files, Directories, and Projects 5.1 Equations	13
	5.3 Callout blocks	- 13

4 CONTENTS

## Why R and RStudio?

Chapter justifying the use of R and RStudio

### Installing R and RStudio

Installing software.

- 2.1 Installing R
- 2.2 Installing RStudio

#### A Tour of R and RStudio

Learn the basics of using R and RStudio

## R As a Statistical Programming Language

This chapter describes R as a statistical programming language to give you some basic concepts to understand how R works.

# Files, Directories, and Projects

#### 5.1 Equations

Here is an equation.

$$f(k) = \binom{n}{k} p^k \left(1 - p\right)^{n - k} \tag{5.1}$$

You may refer to using \@ref(eq:binom), like see Equation (5.1).

#### 5.2 Theorems and proofs

Labeled theorems can be referenced in text using \@ref(thm:tri), for example, check out this smart theorem 5.1.

**Theorem 5.1.** For a right triangle, if c denotes the length of the hypotenuse and a and b denote the lengths of the **other** two sides, we have

$$a^2 + b^2 = c^2$$

 $Read\ more\ here\ https://bookdown.org/yihui/bookdown/markdown-extensions-by-bookdown.html.$ 

#### 5.3 Callout blocks

The R Markdown Cookbook provides more help on how to use custom blocks to design your own callouts: https://bookdown.org/yihui/rmarkdown-cookbook/custom-blocks.html