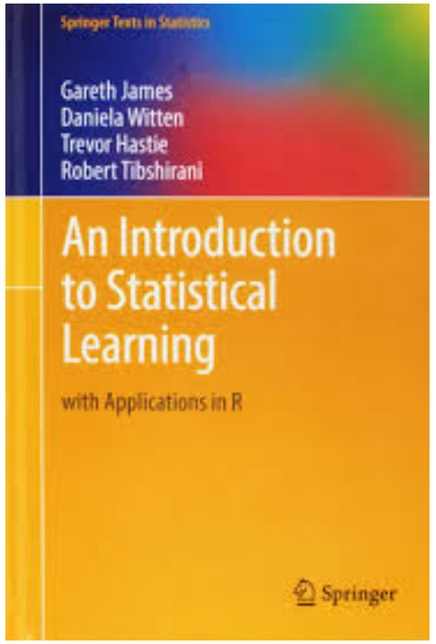




# Statistical Thinking for the 21st Century



*Draft: 2019-04-06*

# Preface

## 0.1 Why does this book exist?

In 2018 I began teaching an undergraduate statistics course at Stanford (Psych 10/Stats 60). I had never taught statistics before, and this was a chance to shake things up. I have been increasingly unhappy with undergraduate statistics education in psychology, and I wanted to bring a number of new ideas and approaches to the class. In particular, I wanted to bring to bear the approaches that are increasingly used in real statistical practice in the 21st century. As Brad Efron and Trevor Hastie laid out so nicely in their book "Computer Age Statistical Inference: Algorithms, Evidence, and Data Science", these methods take advantage of today's increased computing power to solve statistical problems in ways that go far beyond the more standard methods that are usually taught in the undergraduate statistics course for psychology students.

The first year that I taught the class, I used Andy Field's amazing graphic novel statistics book, "An Adventure in Statistics", as the textbook. There are many things that I really like about this book – in particular, I like the way that it frames statistical practice around the building of

# R FOR DATA SCIENCE

## Data Visualization

Prof. Dr. Jan Kirenz