Duke Sports Analytics Club - A Guide to Getting started with R

Resources for learning R below. Also a recommended learning pathway below as well.
Feel free to reach out to Sean Li @ sean.li571@duke.edu with any questions or help.

GIT + GITHUB!! It is super important that you learn about git and how to use github as it will be very essential in project teams and sharing your work.

- Read: Introduction to Git | The Odin Project
- Watch: **Git Essential Training: The Basics**
- **Learning Git and GitHub** (2nd part on github)

R STUFF

Introduction to R – Workshop Home

- Contains all the resources you will need to learn and get good at R
- Multi part Tutorial Course called "Rfun"
    - Would recommend starting here
- Textbook: R for Data Science
    - Great resource to look up concepts if you don't understand
- Workshop Recordings

Free Online Textbooks

- R Cookbook - https://rc2e.com
- R for Data Science - https://r4ds.had.co.nz/
- Data Visualization with R - https://rkabacoff.github.io/datavis/

LinkedIn Learning is free with Duke!

R Essential Training: Wrangling and Visualizing Data

Hands on Coding Practice!!

- Free Codecademy coding practice: Learn R | Codecademy
- Some features are pro like quiz + proj and stuff so don't worry about doing those

Swirl is a free online course that teaches R and data science to beginners:
swirl | Students

Recommended Learning Approach

1. Install R and RStudio on your computer
    a. Watch All of Part 2: Getting Started
    b. Download the RStudio IDE (desktop version)
2. Introduction + Loading Data
    a. Complete first 2 sections Codecademy Course (linked above)
        i. Section 1 - Learn R: Introduction
        ii. Section 2 - Learn R: Data Frames
    b. Read about Loading Data: Data Management
    c. Complete Exercise 1 Loading Data quiz: Exercise 1
3. Wrangling Data
    a. Read about data wrangling: Data Wrangling
    b. Complete CodeAcademy Course Section 3 - Learn R: Data Cleaning
    c. Take Exercise 2 Quiz: Exercise 2: Data Wrangling
4. Visualization
    a. Read about it: Visualization
    b. Complete CodeAcademy Course Section 4 - Learn R: Fundamentals of Data Visualization with ggplot2
    c. Watch videos + follow along:
        i. https://rfun.library.duke.edu/portfolio/ggplot_workshop/
        ii. Warpwire
5. Coding Practice
    a. https://rstudio.cloud/learn/primers
        i. Complete 'The Basics', 'Work with Data', 'Visualize Data', 'Tidy your Data'
    b. https://app.datacamp.com/learn/courses/free-introduction-to-r
        i. Free account + this course
6. Learn Git + Github
    a. See resources near top

When you complete this, feel free to complete the rest of the Codeacademy Course as well as the LinkedIn Learning Course. Also a good way to test how you've learned is to complete some of the swirl learning lessons: swirl | Students

As a note, some of these resources and stuff will overlap but to be honest the best way to learn something quick is to learn it more than once and practice it.

More resources will be added but this should be more than enough for now :)