Appendix A

Introduction to R and RStudio

R is an interpreted programming language for statistical computing. It has become very popular in statistics and in data science in general. RStudio is a software company that among very different products also distributes the Integrated Development Environment called **RStudio IDE**. There is a lot of good material available for R and RStudio. We are just showing a few references here.

- **R**: On the left pane of the R-website there is a **Documentation** section. From the manual section there is a link to an introductory document at https://cran.r-project.org/doc/manuals/r-release/R-intro. html.
- **RStudio**: The RStudio web-site provides a great collection of webinars. Under Resources at https://resources.rstudio.com got to **RStudio Essentials**.

Appendix B

Introduction To Linear Algebra

Linear algebra is a large field in mathematics. From all of linear algebra, we only need some basic notions of the following two terms

1. **vector** and
2. **matrix**

For both topics there are introductory videos on http://www.3blue1brown.com. The introduction on vectors is available at https://www.youtube.com/watch?v=fNk_zzaMoSs&list=PLZHQObOWTQDPD3MizzM2xVFitgF8hE_ab&index=2&t=10s. The videos on matrics can be viewed from https://www.youtube.com/watch?v=kYB8IZa5AuE&index=3&list=PLZHQObOWTQDPD3MizzM2xVFitgF8hE_ab and https://www.youtube.com/watch?v=XkY2DOUCWMU&index=4&list=PLZHQObOWTQDPD3MizzM2xVFitgF8hE_ab.