

MATHEMATICS E-156, SPRING 2014
MATHEMATICAL FOUNDATIONS OF STATISTICAL SOFTWARE
How to download and install R

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Do this installation and setup at the first opportunity, so that your laptop will be set up properly!

1. Create a folder for Math E-156 on your laptop.
I use C:\Courses\E156-2014.
2. Google “Harvard Hollis,” then search for ”Haigh Probability.” Click the “Online” button for the 2013 edition of Probability Models. You will need to login with your Harvard ID and PIN in order to download the book. Save it in your Math E-156 folder. Also print it if you like.
3. Navigate to <https://sites.google.com/site/ChiharaHesterberg>.
Click on the Data Sets zip file and extract everything to your Math 156 folder. Numerous .csv files will appear in a new subfolder named Data. To see what one looks like, open the file named **Beerwings.csv** (a small file which features prominently in section 1.8 and chapter 3 of the textbook) in Excel. You will get strange error messages about SYLK format, which are related to the fact that the first two characters are “ID.” Ignore them. There will be no problems reading these files into R.
4. Download the R tutorials from the ChiharaHesterberg site. It’s probably a good idea to print these and put them into a loose-leaf binder.
5. Google “Download R” and download and install version 3-0-2. Since many students’ laptops will support only the 32-bit version, we will standardize on that one.
6. Go to page 6 of the “Getting Started with R” tutorial and follow the instructions for changing the “Start in” directory so that it becomes the Data subfolder of your Math E-156 folder. To check that everything is working, double-click the shortcut to R and type the command

```
> read.csv("Beerwings.csv")
```


You should see the same rows and columns that you earlier saw in Excel.
7. Work through the entire “Getting Started with R” tutorial. When you open a data set like **FlightDelays**, you will not have to type the full path, just the file name. Don’t try to memorize all the commands; just get an idea of what the language can do.

8. Create a subfolder named Scripts in your Math E-156 folder. Return to the ChiharaHesterberg site and select Chapter Materials. Download all the R Scripts to your Scripts subfolder. Now start up R with your shortcut. Select Open Script from the File and open the script for Chapter 2. By using Control-R, you can execute the commands in this file one at a time. Just remember, when a graphics window opens, to close it before executing the next command.
9. When in R, go to Help → Manuals, and download “An Introduction to R.” It’s probably worth printing this document also. It’s a pretty good language reference, although it includes many details that will not be needed for this course.
10. Go to the R Scripts(work in progress) page on the Web site and download all the scripts into your Scripts folder. Also download the Excel file that keys these to pages in the textbook.