Getting started with R

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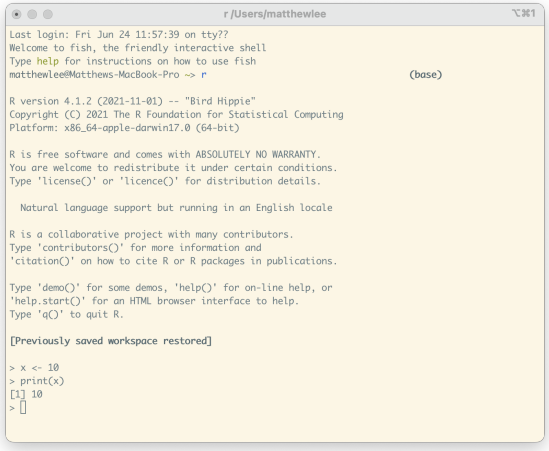
What is R?

- R is an open-source **interpreted** programming language: when you install R, you install an *interpreter* that translates your R code into computer code (sometimes called "machine" code), which is what actually gets run
- This is in contrast to **compiled** languages (e.g. C or C++), where the programmer writes code that is directly converted into machine code
- Several advantages of interpreted languages: much more user friendly, easily read, consistent across operating systems
- Some disadvantages: often slower, and less control over system hardware*

Action step: Install R (https://cloud.r-project.org/)

R Studio: Integrated Development Environments (IDEs)

- We can interact with R directly via a command line (e.g. Terminal)



- But this is not very pretty or reproducible! A population alternative is to use an IDE, such as R Studio, which is a program that adds a whole lot of convenience to writing and running R code
- IDEs are not the language themselves, they provide a way to interact with the language installed on your computer in a friendly way

Action step: Install R Studio (https://www.rstudio.com/products/rstudio/download/)

Working in R Studio

Key R Studio panes:

- Console: Runs R code, either interactively or via an R script
- Terminal: Convenient terminal application (primarily useful for version control programs like git/GitHub)
- Environment: Objects you've saved to your **working R environment**
- Files: File navigator, useful if you need to figure out where data/R scripts are located
- Plots: Plots generated will populate in this pane – you can also export plots you create using the "Export" button

Troubleshooting/Q&A