Session 0

Welcome to the Intro to Data Analysis in R\* Series! This 6-part series will introduce you to basic coding concepts in the R software language for the purpose of data analysis. While the series will focus on using R for data analysis, the concepts learned from this course will introduce participants to universal coding concepts which can be used to perform functions outside of data analysis and are transferable to other coding languages. By the end of this series, a participant can expect to know how to import data from an online source using an API, clean and merge the dataset with existing dataframes, write functions to transform the data and prepare for analysis, calculate summary statistics using R, and visualize the data based on variables/groups of interest.

Let’s get started!

Before we meet for the first session, we’ll need to set up our **integrated development environment (IDE)** - this is essentially the interface or program we will use to code on our computers (think using Microsoft Word as your text editor). There are many IDEs to choose from and the difference between them all really comes down to your preference. Because **Visual Studio Code (VS Code)** is pre-approved by CAP’s IT team, we’ll use that one (it’s also my preferred IDE).

**First, we’ll need to download and install R.**

* Go to <https://cloud.r-project.org/> to begin and select either “[Download R for macOS](https://cloud.r-project.org/bin/macosx/)” or “[Download R for Windows](https://cloud.r-project.org/bin/windows/)” depending on your device.
* For Mac users:
  + On your menu bar, select the *Apple icon > About This Mac* and look at what it says under “chip.” Then select the installation package that matches your system.

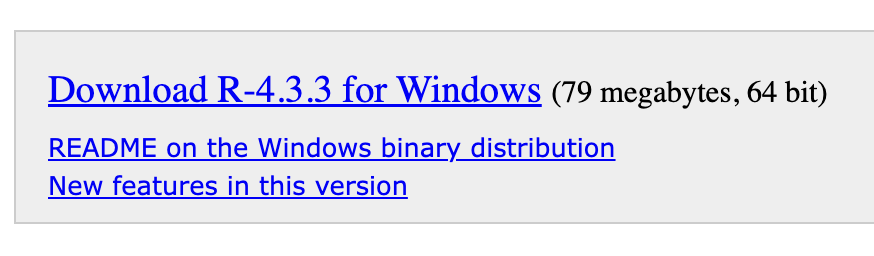
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* For Windows/PC users:
  + Select “base” on the next page and then Download R-4.3.3 for Windows on the following page.



* Finally, you’ll need an administrator password to complete the installation, so arrange a time with the IT team. **Please make sure this is done before the first session!**

**How to Setup VS Code:**

* **Installation:**
* For Mac Users:
  + [Refer to the Confluence page for help](https://americanprogress.atlassian.net/wiki/spaces/ITKB/pages/63767136/Installing+Software+Applications+using+MacManage)
  + Open MacManage from your desktop’s menu bar

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* + Scroll down and install Visual Studio Code. This should automatically install VS Code to your Applications. When it is installed, navigate to your applications folder to launch.

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* For PC Users:
  + [Refer to the Confluence Page for help](https://americanprogress.atlassian.net/wiki/spaces/ITKB/pages/63767485/Installing+Software+Applications+using+the+Company+Portal)
* **Setup:**
  + You will need to add a few extensions to VS Code before starting.
  + Open VS Code
  + On the right menu, navigate to Extensions.

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* + In the search bar, type “R extension.” This should prompt the following list of extensions.

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* + From the list, install “R” and “R Extension Pack”
    - **Optional:** I also recommend searching for and installing the following extensions
      * Path Intellisense
      * GitLens
      * Blackbox AI Code

You’re now ready to start coding!

Optional, but encouraged: GitHub is a ubiquitously used cloud tool for coders. It is essentially like Google Drive for coding, with a few features that are particularly useful for coders/coding projects. I highly encourage everyone to create a GitHub account.

**How to Setup GitHub:**

* Create a free account at <https://github.com/>
* Install GitHub Desktop on your device:
  + For Mac users, this is a pre-approved app in MacManage
  + For Windows/PC users,…..