

R for Economics

Wesley Brashear

11 January 2022

“Introduction”

Sources and additional resources

- DataCamp - <https://app.datacamp.com/learn>
- Data Carpentry - <https://datacarpentry.org/>
- R for Data Science - <https://r4ds.had.co.nz/data-visualisation.html>
- UCSB Carpentry - <https://ucsbcarpentry.github.io/2021-05-06-IntroR/07-plot-ggplot2/>
- tutorialspoint - <https://www.tutorialspoint.com/index.htm>

And many more...

Day 1 - Tuesday, January 11th, 9:00 - 4:00

1. Orientation
2. Introduction to RStudio
3. R as a calculator
4. Data types
5. Variables
6. Functions
7. Loops
8. Matrices
9. Data frames



Day 2 - Friday, January 14th, 9:00-4:00

1. Factors
2. User-created functions
3. Data visualization in R
4. Working with R markdown



Orientation

Learning Objectives

- 1) Motivate use for R in Economics
- 2) Get started with RStudio
- 3) Get the “R for Economics” notebook working



Orientation

What is R?

- A high level object oriented programming language and environment for statistical analysis and graphics.
- Open source free software



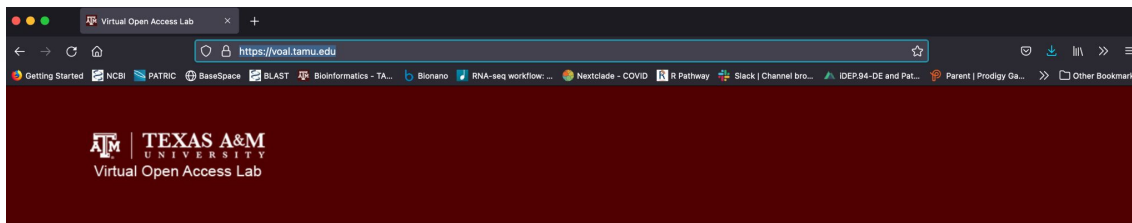
Orientation

Why R?

- Commonly used for Data Analytics / Science
- Built-in functions for statistical analysis
- Highly customizable, publication-quality graphics
- Can easily build web-apps without prior knowledge of web development.

Getting Started

Navigate to <https://voal.tamu.edu/>



[VOAL Setup Information](#)

NOTE: The desktop interaction may seem slower for a VOAL full desktop or application as compared to your own computer. This is especially true for photo or video editing. VOAL performance varies during the day/week. Suggestions, questions or concerns please email helpdesk@tamu.edu or call Help Desk Central at 979-845-8300

IF YOU NEED TO ACCESS LOCAL DRIVES OR USE A USB DEVICE WITH VOAL, YOU MUST INSTALL THE HORIZON CLIENT FOR YOUR OPERATING SYSTEM. Instructions can be found in VOAL Setup Information.

SUBJECT: Important Change for VOAL Access

Beginning August 14, 2018, your Virtual Open Access Labs (VOAL) account will require you to be enrolled in Texas A&M Division of Information Technology's NetID Two-Factor Authentication (Duo).

If you are already enrolled in Duo, you will be prompted to use your enrolled device, along with your NetID and password, when you log in to the campus VOAL website. No other action is required.

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If you have any questions about Duo, please contact Help Desk Central at 979.845.8300 or helpdesk@tamu.edu.

Thank you,
Open Access Labs

[Log In](#)

[Forgot your Password?](#)

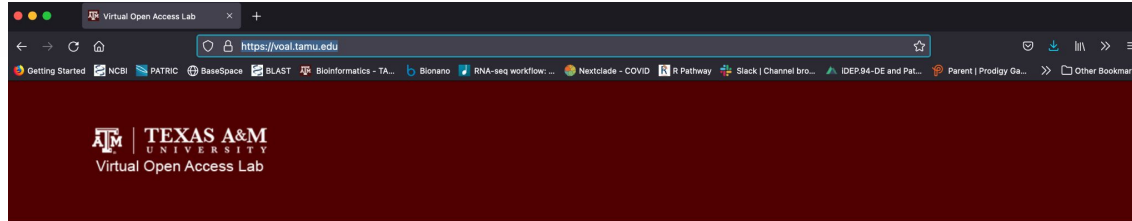
VOAL Client Connector Downloads

[VMware Horizon Client](#)



Getting Started

Click on “Log In”



[VOAL Setup Information](#)

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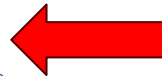
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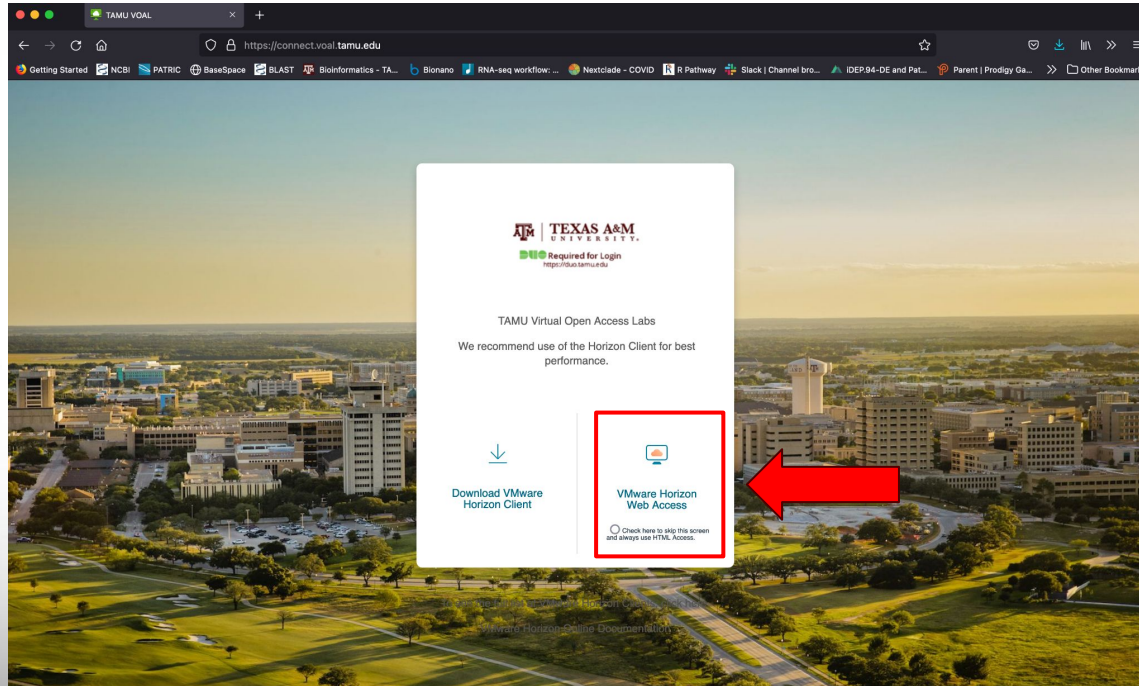
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Getting Started

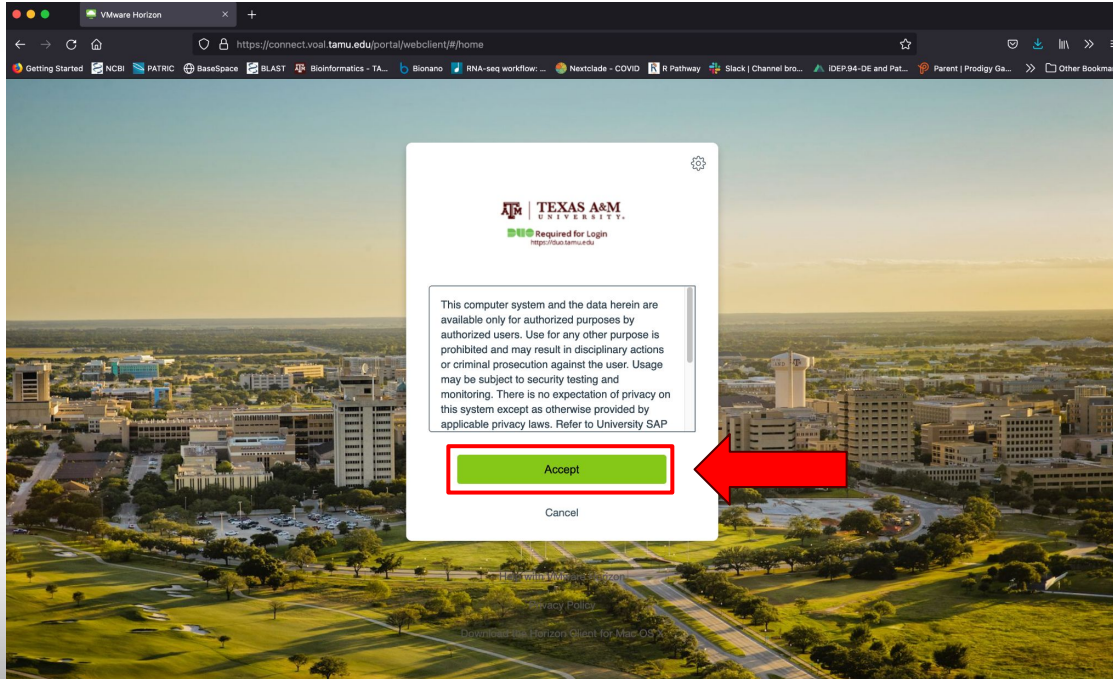
Select the VMware Horizon Web Access



The screenshot shows a web browser window with the URL <https://connect.voal.tamu.edu>. The page features the Texas A&M University logo and the text "Required for Login" with a link to <https://itus.tamu.edu>. Below this, it says "TAMU Virtual Open Access Labs" and "We recommend use of the Horizon Client for best performance." There are two main options: "Download VMware Horizon Client" and "VMware Horizon Web Access". The "VMware Horizon Web Access" option is highlighted with a red box and a red arrow pointing to it. Below the "VMware Horizon Web Access" option, there is a radio button and the text "Check here to skip this screen and always use HTML5 Access".

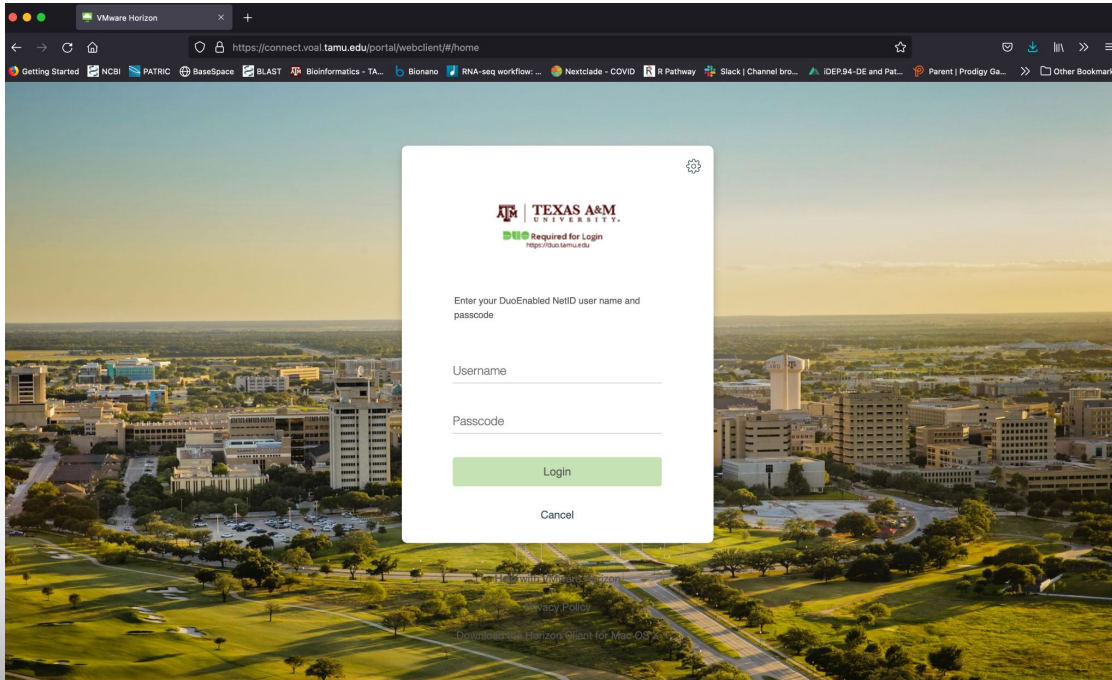
Getting Started

Click “Accept”



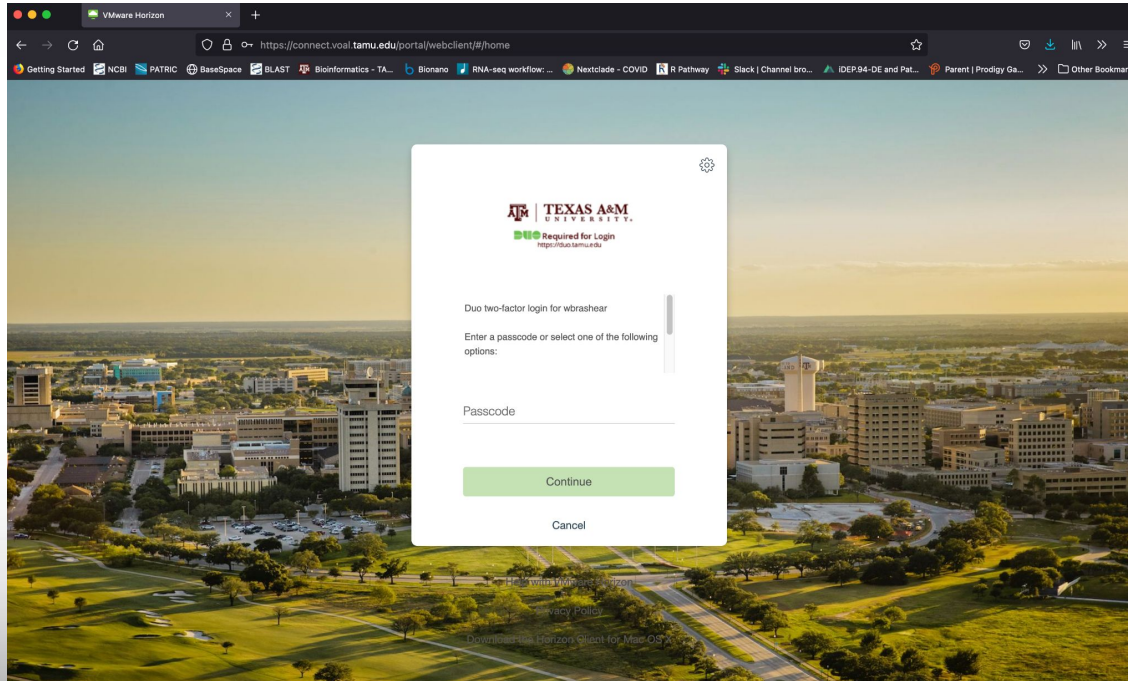
Getting Started

Enter your username and password



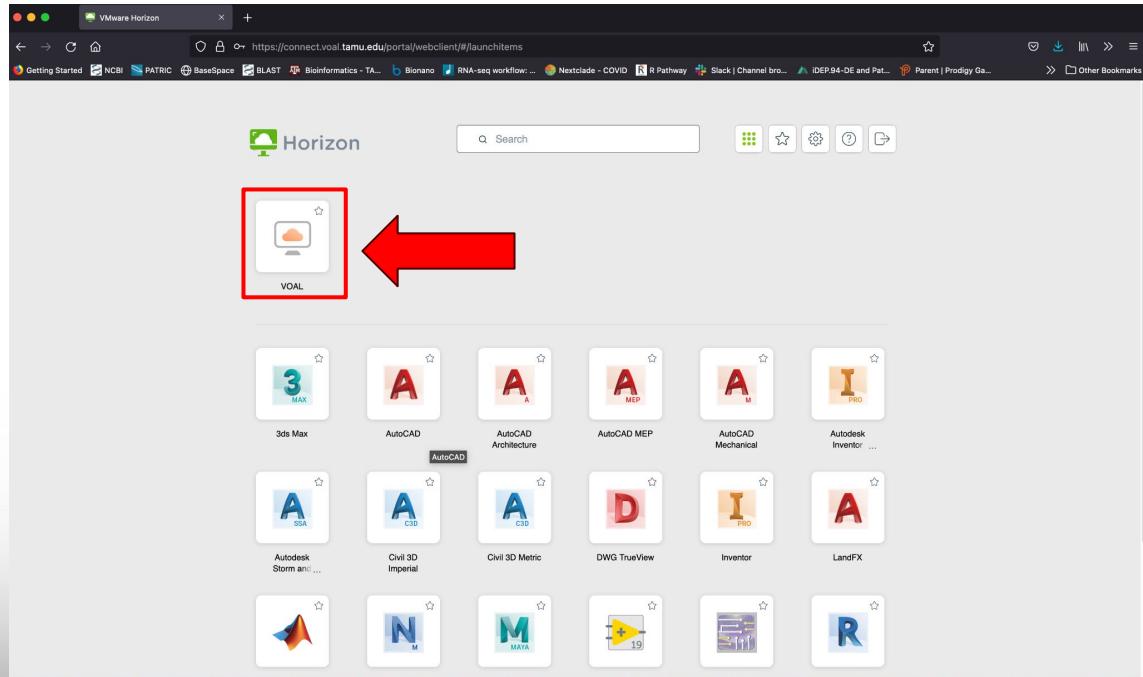
Getting Started

Enter “1” to get send a Duo Push



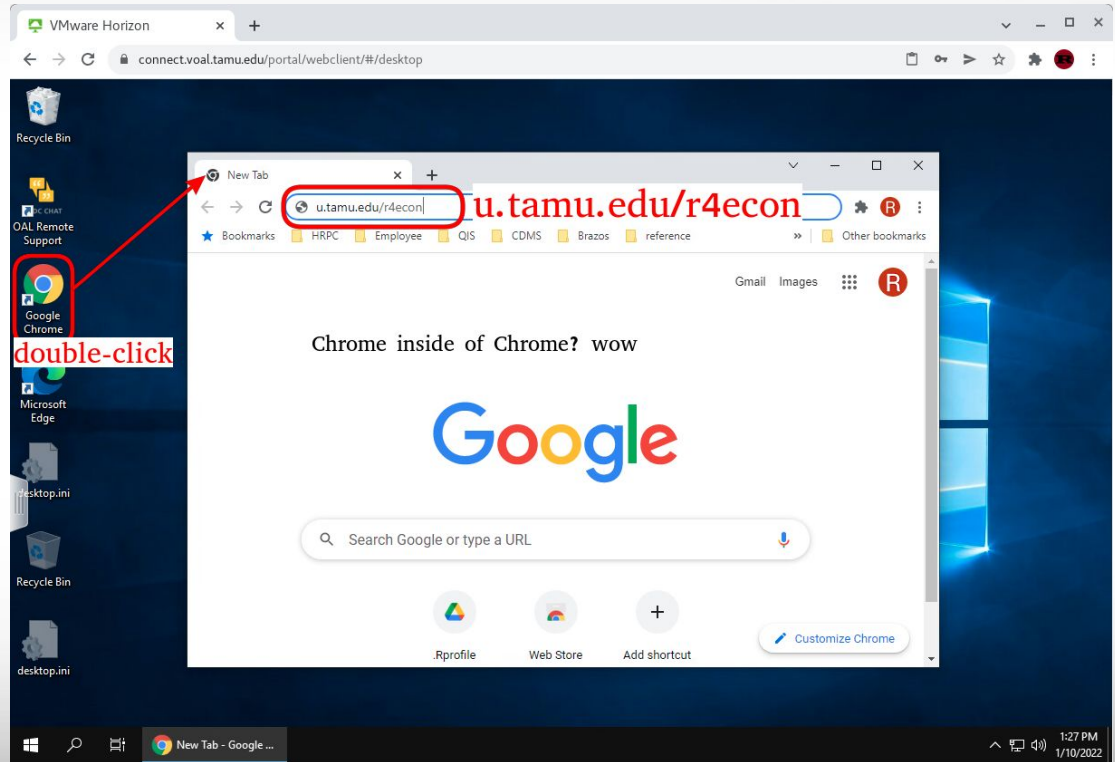
Getting Started

Select the “VOAL” Icon to start the Desktop - this will take some time to load



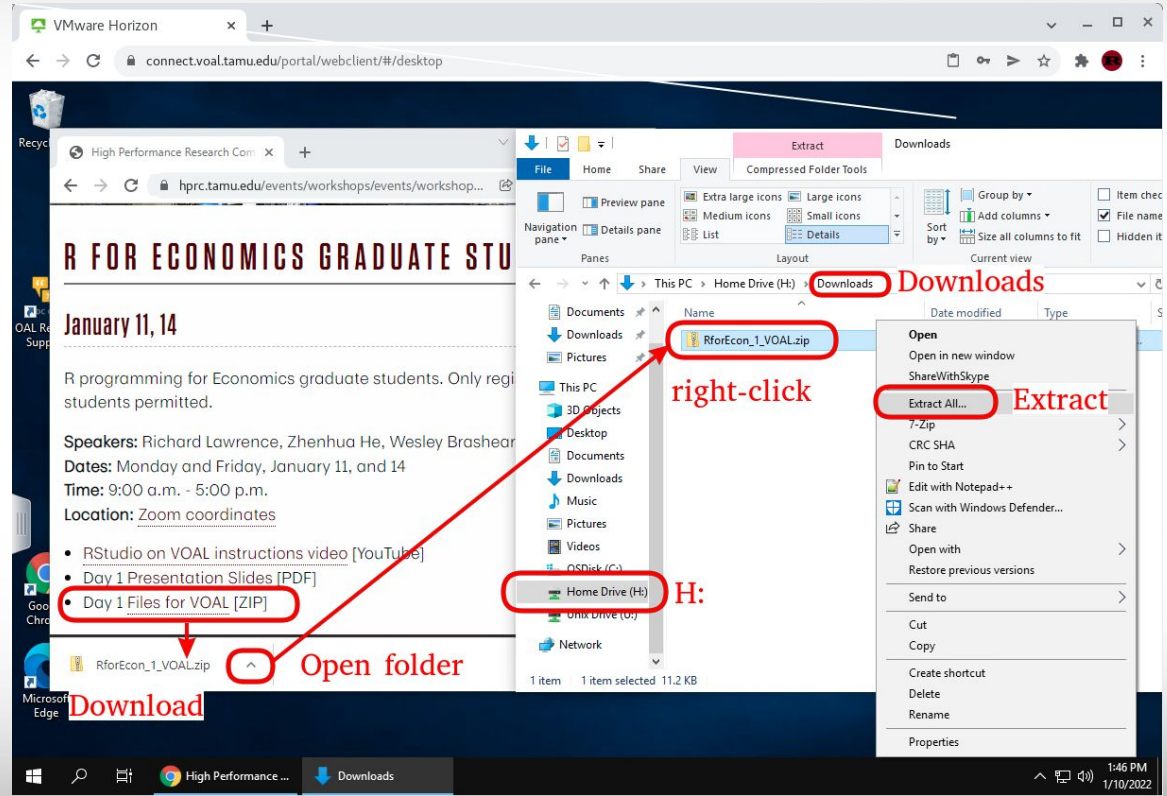
Getting Started

- Open Google Chrome and navigate to u.tamu.edu/r4econ



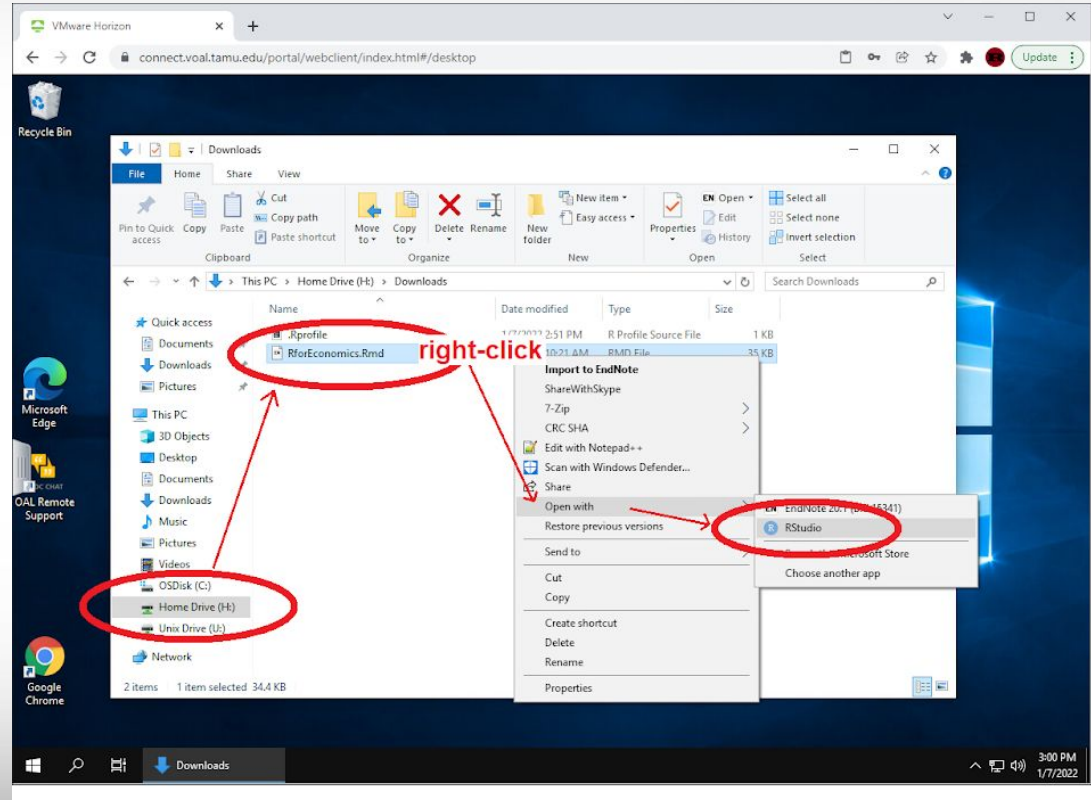
Getting Started

- Download “Day 1 Files for VOAL”
- Open the folder
- Right click on the zip file
- Select “Extract All...”



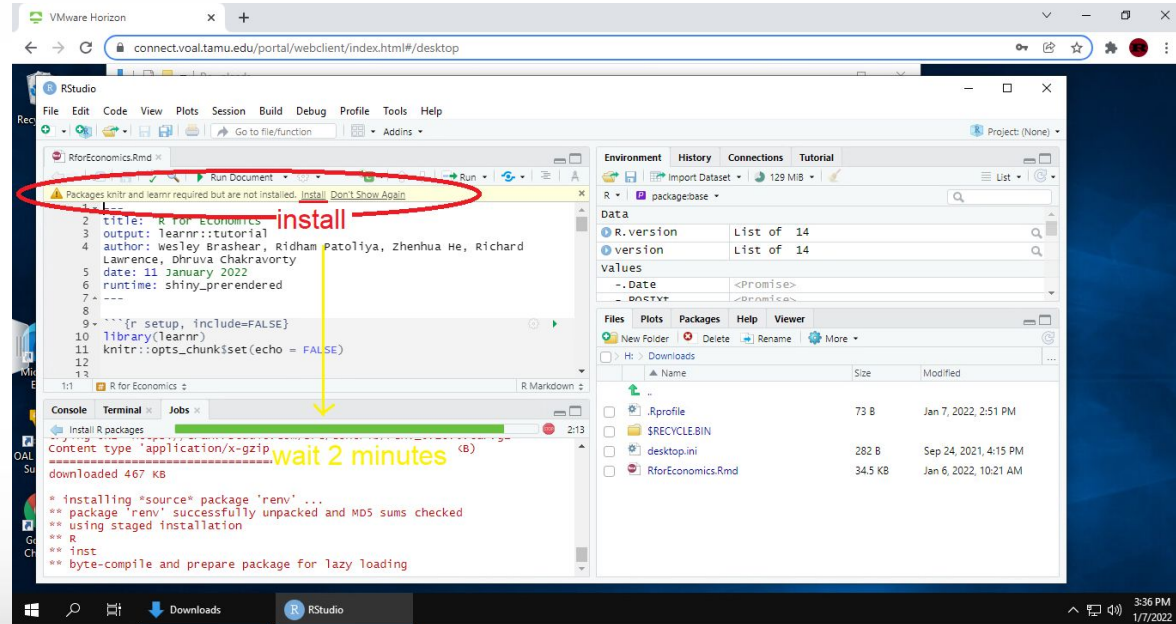
Getting Started

- Right click on the “RforEconomics.Rmd” file
- Select “Open with”
- Select RStudio.



Getting Started

- In RStudio, you will receive a prompt to install some R packages
- Click “Install” and wait for the process to complete



Getting Started

- Once the install is complete, click on “Run Document”
- This will bring up the R markdown workbook for the class

The screenshot shows a VMware Horizon desktop environment. In the foreground, the RStudio application is open, displaying an R Markdown document titled "R for Economics.Rmd". The document content includes a title, authors (Wesley Brashear, Ridham Patoliya, Zhenhua He, Richard Lawrence, Dhruva Chakravorty), a date (11 January 2022), and a code chunk for setting up the 'learnr' library. A red circle highlights the "Run Document" button in the RStudio toolbar, with a red arrow pointing to it and the word "run" written in red. Below the RStudio window, the console shows the output of the code chunk, including the command "output created: RforEconomics.html" and the URL "Listening on http://127.0.0.1:5172". A red arrow points from the console output to a web browser window in the background. The browser window shows the rendered R Markdown document, titled "R for Economics", with a "Popup!" label. The document content includes the title, authors, date, and a section titled "R as a calculator" with a sub-section "Arithmetic Operators" containing a list of operators: Addition, Subtraction, Multiplication, Division, and Exponentiation. A red arrow points from the "wait" label in the console to the rendered document. The browser window also shows a file explorer view of the local file system, with a red arrow pointing from the console output to the "RforEconomics.html" file.

Quizzes for Participation

One-question quizzes will be given regularly today.

Your ECON instructor will be informed of your participation.

The first quiz is now. (on Zoom: link to be posted in chat)

https://docs.google.com/forms/d/e/1FAIpQLScAifu7APdQy-r1st4wqlhumVLmvxy6615FKEDmnGRIRI7NOw/viewform?usp=sf_link



Ten minute break

